RCRA CLOSURE PLAN
LOS ANGELES COUNTY
DEPARTMENT OF AGRICULTURAL COMMISSIONER
PICO RIVERA FACILITY
8841 EAST SLAUSON AVENUE
PICO RIVERA, CALIFORNIA

Prepared for:

Los Angeles County
Department of Agricultural Commissioner
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November 2006 (Revised January 2007)

This RCRA Closure Plan for the Los Angeles County Department of Agricultural Commissioner Pico Rivera Facility located at 8841 East Slauson Avenue, Pico Rivera, California dated November 2006 (revised January 2007) has been prepared and reviewed by the following:

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SECTION 1

FACILITY IDENTIFICATION

FACILITY NAME, OWNER, CONTACT INFORMATION

SCS Engineers (SCS) was retained by the Los Angeles County Department of Agricultural Commissioner (LACDAC) to prepare this RCRA Closure Plan for the formerly active LACDAC Pico Rivera Facility (LPRF). The LPRF is located at 8841 East Slauson Avenue, Pico Rivera, California (Figures 1 and 2). The EPA identification number for this facility is CAD000626077.

The facility is owned by Los Angeles County and operated by LACDAC. The business of LACDAC includes eradication of serious pests. This action protects the environment from increased pesticide application and agriculture and consumers from increased costs for pest control. Contact person at LACDAC, with mailing address, phone number, and other information, is:

Mr. Raymond B. Smith
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This Closure Plan was prepared to satisfy the requirements of California Code of Regulations Title 22, Section 66264.112 and other applicable regulations. The Closure Plan was prepared in accordance with the suggestions set forth in Permit Writer Instructions for closure prepared by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) and dated October 2002. DTSC is providing oversight for the closure of the LPRF. This Closure Plan was prepared by SCS under the direct oversight of Kenneth H. Lister. Contact information for SCS is on the title page of this report.

Certification for this Closure Plan is as follows:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signed Raymond B. Smith for LACDAC, on date FEBRUARY 20, 2007

SECTION 2

FACILITY LOCATION

FACILITY SIZE AND TOPOGRAPHY

The LPRF is an approximately 1.7-acre parcel which has been used by LACDAC since approximately 1930 for the following purposes: offices, raising of beneficial insects, mixing of rodent and bird baits for pest control, disposal of pesticides acquired from a pesticide collection program, and incineration of plants held under quarantine for pests or disease.

The LPRF is located in a mixed residential, industrial, commercial area. The site is bounded on the north, west, and east by residential properties. Industrial facilities are located to the south, immediately across Slauson Avenue. Most of the site is surrounded by an 8-foot high concrete block wall on the east, north, and west sides and an 8-foot chain-link fence with a locked gate on the south. An approximately 50 by 200 foot grassy area at the southern end of the site is unfenced.

The LPRF is located in Township 2 South, Range 12 West, Section 26 (San Bernardino Baseline and Meridian) at an elevation of approximately 150 feet above mean sea level [United States Geological Survey (USGS) Whittier, California 7.5 Minute Topographic Map, 1965, photorevised 1981). The site is located in the Downey Plain approximately 4 miles southwest of the Whittier Narrows Flood Control Basin. The site is situated approximately 1.5 miles west of the San Gabriel River and approximately 0.75 miles east of the Rio Hondo River. Regional topography slopes gradually towards the southwest at about 30 feet per mile. The topography of the site is nearly flat except an approximately 10 foot wide strip near Slauson Avenue where ground slopes steeply down about 5 feet to the street.

A portion of the U.S. Geological Survey topographic map for the area within one mile of the facility and a detailed topographic map of the site has been included in Appendix A.

HYDROGEOLOGY

Geologic Information

Geologic maps (California Division of Water Resources, Bulletin 104, Appendix A, 1961) indicate that the surficial sediments consist of Recent age stream and floodplain deposits composed of interbedded gravel, sand, silt, and clay. Sediments below these reportedly consist of similar deposits of the Pleistocene Lakewood Formation. The Whittier fault located approximately 4 miles north of the site is the closest known active fault to the LPRF.

Investigations conducted by SCS indicate that soils beneath the site to depths of up to 55 feet bgs generally consist of fine to coarse-grained sand interbedded with fine gravel, silts, and clay. As summarized in the RCRA Facility Investigation (RFI) Report (SCS, July 2001), soil samples collected from BH5(B) indicate that interbedded layers of gravel, sand, silt, and clay are present beneath the site at depths from 19 feet bgs to approximately 33 feet bgs. Within this interval, silt and clay layers up to four feet thick were encountered.

Hydrogeologic Information

The site is located in the Montebello Forebay area of the Central Ground Water Basin. Bulletin 104 of the California Department of Water Resources indicates that the first regional aquifer in the vicinity of the site is the Gaspur aquifer located between depths of approximately 50 and 100 feet bgs.

Based on regional groundwater maps published by DPW (Costal Plain, Shallow Aquifer Groundwater Contour Map, Fall 1978 and Hydrologic Report 1992-93) and on topography, groundwater is anticipated to flow in a south to southwest direction. This is consistent with water level measurements conducted in on-site wells. The Rio Hondo Spreading (percolation) Basins located approximately 0.5 miles to the northwest may seasonally influence groundwater flow direction.

The closest active municipal water supply wells are operated by the Pico Rivera Department of Public Works and Pico Water District and are located approximately 0.35 miles east and 0.4 miles west of the subject, respectively. No surface bodies of water are present at the site. The closest surface water bodies are the spreading basins of the Rio Hondo, located approximately 3,000 feet west of the site.

Review of a hydrograph from DPW Keywell No. 1601T located approximately one mile northeast of the site indicates that seasonal water level fluctuations in the area can average 10 to 15 feet per year (DPW Hydrologic Report, 1992-93). On-site water level measurements indicated a range of 15 to 17 feet between 1997 and 2000.

During drilling, groundwater was encountered in monitoring wells MW-1, MW-2, and MW-3 at a depth of approximately 38 feet bgs. Groundwater monitoring well locations are shown on Figure 3 and construction details in Table 3. As shown in the most recent groundwater gradient map (Figure 4), flow is in a southerly direction with a gradient of approximately 0.005 ft/ft.

WEATHER CONDITIONS

The site is located approximately 10 miles southeast of downtown Los Angeles the climate in both locations is similar. At downtown Los Angeles the average seasonal rainfall is approximately 14.8 inches, the annual average high temperature is 75 degrees F, and the average annual low is 57 degrees F. Most rainfall occurs between November and April. Winds are generally light and tend to be from the south and southwest during the day with north winds in the evenings in the fall and winter (National Weather Service).

SECTION 3

FACILITY DESIGN

UNDERGROUND STORAGE TANK (UST) DESCRIPTION

The former fiberglass UST had a capacity of 4,000 gallons. This unit was (interim) permitted through completion of the EPA Hazardous Waste Permit Part A (copy in Appendix B). The 4,000 gallon underground storage tank (UST) was located immediately west of the northern end of the main building (Figure 2). The UST was 8 feet in diameter and approximately 15 feet long at its greatest dimension (see design plans reproduced in Appendix C). It did not have secondary containment.

The UST, which was removed from the site in September 1992, was used for storage of water from cleaning of equipment used to mix baits; this water was introduced to the UST through a drain in a sink in the building. The UST also received liquid pesticides from the LACDAC pesticide collection program and pesticide container rinse water; these were introduced to the UST through a drain located in the eastern part of the 25- by 25-foot, bermed concrete pad ("wash rack") located above the UST. A revised Part A, dated July 25, 1991, proposed converting the wash rack to a drum storage area for up to 3,000 gallons of waste storage. Ancillary equipment consisted of underground piping. Liquid was piped through a clarifier ("sand trap") and into the tank and was also piped from a sink in the main site building. The eastern part of the concrete pad including the drain, that allowed liquid to pass into the clarifier and then into the UST, was removed in May 1992 and the remainder of the pad was removed during 1994. Impacted soil excavated during UST removal was stored on site in bins. Soil and bins were removed in 1995.

Substances that may have been introduced to the UST, for the most part through the public collection program, are discussed in Section 4 of this Closure Plan. The April 4, 1989 Part A listed a number of wastes. Historical throughput in terms of total or individual volumes is not known. Current throughput is zero. The RFI involved near-surface and subsurface soil sampling in the vicinity of the former 4,000 gallon UST.

Since this unit included an UST without secondary containment, California Code of Regulations Section 66264.197 (c) requires a post-closure contingency plan. This plan is included in Appendix D.

HAZARDOUS MATERIALS STORAGE VAN

The other permitted unit for hazardous waste consisted of a lockable, skid mounted, steel storage container ("sea bin", "40-foot cargo container van") where solid-phase (granular or powder) pesticides collected from the public were stored. The metal storage van or container was located northwest of the main building adjacent to a former garage and had dimensions of approximately 10 by 10 by 40 feet. Permit storage capacity was 8,250 gallons (equivalent to 150 drums). The container was used to store non-liquid pesticides in drums and lab-pack containers. The unit was self contained and itself served as a secondary containment for the material in drums and lab-pack containers. Wastes arrived on site during the public collection program. There were no monitoring systems or ancillary equipment.

Pesticides had not been stored in the van for a number of years. The container was removed from the site in 2001. Historical throughput in terms of total or individual weights or volumes is not known. Current throughput is zero. Near-surface soil sampling took place near the entrance to the sea bin during the RFI.

OTHER AREAS

Waste was not stored in other portions of the facility, however other areas of the site where hazardous materials might have been handled were investigated during the RFI. Results of RFI activities were previously reported (SCS, July 2001).

Although apparently never used for this purpose, a third hazardous waste storage unit was incuded in a second Part A permit application dated July 24, 1991. This unit would have been physically identical to the "wash rack" associated with the 4,000 gallon UST discussed above and have been used to temporarily store up to 3,000 gallons of waste in drums. The sketch map accompanying the July 1991 Part A form labels this "concrete impoundment area for drums". Since this area was apparently never used for this purpose, since there is no indication that a permit was actually granted, and since it is physically identical with the bermed concrete wash rack associated with the 4,000 gallon UST, the former location of this structure will not be further considered as a separate RCRA unit in the present Closure Plan.

Table 1 contains a summary of information regarding the RCRA units.

SECTION 4

DESCRIPTION OF HAZARDOUS WASTE CONSTITUENTS

CHEMICALS USED ON SITE

Information provided by LACDAC indicates that the following substances were formerly stored/mixed at the LPRF. These can be divided into several groups.

The following are rodenticides formerly used for mixing bait in the northwestern suite of rooms within the main building:

- Strychnine sulfate.
- Sodium monofluoroacetate.
- Thallium sulfate.
- Zinc phosphide.
- Diphacinone.
- Chlorophacinone.
- Prolin.
- Warfarin.
- Pival.

All rodenticides were received and stored in powdered or pellet form and stored in glass or metal containers. Containers may also have been temporarily stored in the garage.

The following is an organophosphate insecticide that was stored as a solution in glass bottles in the main building:

- Dibrom.

In addition, the following chlorophenoxy herbicides were formerly stored in the northwestern suite of rooms in the main building:

- 2,4 Dichlorophenoxyacetic acid; 2,4-D.
- 2-(2,4,5-Trichlorophenoxy)propionic acid; 2,4,5-TP or Silvex.
- 2,4,5-Trichlorophenoxyacetic acid; 2,4,5-T.

These herbicides were received and stored in liquid form in an aqueous or organic solution. They were stored in glass, metal or plastic containers. Some of these chemicals may also have been temporarily stored in the garage.

Other pesticides and herbicides were received at the site for temporary storage and disposal in connection with the LACDAC pesticide collection program. Compounds known to have been collected and stored on-site as part of the LACDAC pesticide collection program are included on Table 2. Liquid pesticides and pesticide container rinsings were collected in the 4,000 gallon UST described above. Rinse water generated by activities within the main building was also stored in the UST. Pesticides collected through this program were never handled or stored in any on-site building except the sea bin container in which pesticides received in solid form were stored.

Trace amounts of pesticides, which may have entered the site through the public collection program, which were previously detected in soils in the area of the 4,000 gallon UST include:

- Chlordane
- Chlorpyrifos
- Dieldrin
- DDE
- DDT
- Dursban
- Lindane
- Malathion
- Ronnel
- 2,4-D
- 2,4,5-TP (Silvex)

High viscosity petroleum hydrocarbons were stored in the former above ground weed oil tanks. Weed oil consisted predominantly of straight-chain and normal cyclic hydrocarbons and had little or no VOCs and no trace metal content. VOCs were not stored on site except very small volumes that may have been contained in liquid pesticide formulations. Organic liquids that may have been ingredients in pesticide formulations include xylenes and kerosene.

Trace metals that may have been used on site, either as a component of pesticides used or collected on site, or as dyes for rodenticides mixed on site, include the following:

- Arsenic
- Cadmium
- Copper
- Lead
- Mercury
- Thallium
- Zinc

Thallium and zinc were components of rodenticides used on the site, copper may have been a component of rodenticide dyes. Arsenic, cadmium, mercury, zinc, and thallium have been detected in environmental samples collected during pre-RFI investigations in concentrations which may exceed commonly found background concentrations. There is no evidence that any other trace metal was used on site or would have been received as a component of a discarded pesticide.

Information on wastes handled at the site is summarized in Table 2.

SECTION 5

ESTIMATE AND MANAGEMENT OF MAXIMUM INVENTORY

ESTIMATE OF MAXIMUM INVENTORY DURING FACILITY OPERATION

Based on the Part A application (Appendix B) and on historical information from LACDAC files, maximum past inventory of hazardous waste would have been 4,000 gallons in the UST and 8,250 gallons in the sea bin. It is unlikely that the UST ever contained the maximum permitted inventory of waste since it was pumped out periodically and tank liquid level was not allowed to reach capacity. Although no specific documentation exists, it is also unlikely that the sea bin ever contained an amount even close to the maximum permitted volume of waste.

CURRENT INVENTORY

Currently no hazardous waste or hazardous materials are being stored at the site. Based on information contained in the RFI Report (SCS, July 2001), it is estimated that 1.5 pounds of chlorinated pesticides remain on site, in the area of the former 4,000 gallon UST probably as a result of past leakage or spillage. Soil removal is in this area is likely as part of closure activities and as such is described in Sections 6 and 12 of this Closure Plan.

Up to approximately 100 cubic yards of soil will be removed in this area to a depth as great as approximately 20 feet. Excavated soil will be containerized on site until it can be taken off site for treatment and/or disposal. Soil will be handled in accordance with all federal and state laws and regulations, including transportation under manifest. Containerized soil will be sampled and samples analyzed to assist in determining whether the soil needs to be handled as hazardous waste. If it is determined that the soil is hazardous, treatment and/or disposal will be conducted in accordance with appropriate regulations, including any applicable land disposal restrictions.

Estimated transport distance of soil from the site to potential identified final hazardous waste management facilities is as follows:

- Chemical Waste Management, 35251 Old Skyline Road, Kettleman City, CA 93239; 185 miles.
- Clean Harbors, 2500 West Lokern Road, Buttonwillow, CA 93206; 150 miles.
- U.S. Ecology, P. O. Box 578, Highway 95, Beatty NV 89003; 295 miles.

One or more of these may be used as the receiving facility for soil removed from the site.

SECTION 6

DECONTAMINATION PROCEDURES

DECONTAMINATION OF EQUIPMENT, STRUCTURES, AND BUILDINGS

All equipment and structures associated with hazardous waste regulated units have been removed. All buildings but the main site building have also been removed and all structural materials that may have come in contact with hazardous materials during site operations have been removed.

INTERIM CORRECTIVE ACTION MEASURES

The following Interim Corrective Action Measures have been implemented at the site related to RCRA units:

Interim Corrective Action Measure	Date
4,000 Gallon UST Removal	1992
Wash Pad/Drain/Clarifier Removal	1992/1994
Soil Bin Removal	1995
Storage Container Removal	2001

4,000 Gallon UST and Ancillary Structures Removal and Excavation

As previously indicated, a 4,000 gallon UST was formerly located immediately west of the northern end of the main building. A bermed concrete pad was located immediately above and to the west of the UST. A drain in east central portion of the pad connected to the UST through a sand trap (clarifier). The UST received water from cleaning of equipment used to mix baits, pesticide container rinse water, and waste pesticides from the LACDAC pesticide collection program. The UST, eastern portion of the pad, and sand trap were removed in September 1992 during which time an excavation was made of dimensions approximately 30 by 30 foot at the surface. The deepest portion of the excavation was approximately 12 feet below ground surface (bgs). The remainder of the wash pad was removed in 1994.

Soil Bin Removal

Approximately 135 cubic yards of soil from the area of the 4,000 gallon UST was excavated and placed into 9 roll-off bins. Soil in the bins was sampled and, based on analytical results, disposed off site at one of three facilities - Aptus in Aragonite, Utah; Chemical Waste Management Landfill in Kettleman City, California; and BKK Landfill in Azusa, California. Soil in two of the bins was characterized as RCRA hazardous (D020) and was sent to Aptus for incineration. Soil in one bin was characterized as RCRA hazardous (D017) and was sent to Kettleman City for landfilling. Soil in the remaining six bins was characterized as non-hazardous and was sent to BKK for landfilling. Further information regarding soil bin sampling, analysis, and removal is presented in the following documents:

- SCS Engineers' report titled "Preliminary Feasibility Study, Excavated Soil, Los Angeles County Department of Agricultural Commissioner, 8841 E. Slauson Ave., Pico Rivera, California", dated July 20, 1994.

- SCS Engineers' letter titled "Information on Binned Soils, Former Agricultural Facility, 8841 E. Slauson Ave., Pico Rivera, California" dated March 3, 1995.

Storage Container Removal

Pesticides had not been stored in this container for a number of years when it was removed from the site in 2001.

DECONTAMINATION ASSOCIATED WITH SOIL REMOVALS

Excavation and other equipment to be used for soil removals, as described in Section 12 of this Closure Plan, will be decontaminated as described below.

Areas of the site will be divided into the work zone or zones, the decontamination zone, and the support zone. These divisions will be informal unless levels of personal protection above Level C are required, which is not anticipated. The work zone is the area where soil excavation and handling occurs. Personnel and equipment leaving this zone will pass through the decontamination zone and there be decontaminated. All other activities will take place in the support zone.

Earth Moving and Other Equipment

Equipment decontamination will take place as follows:

- Large accumulations of soil will be removed using shovels or other appropriate hand tools.
- In the decontamination zone, use brushes or other appropriate tools to remove accumulations of soil.
- Rinse portions of the equipment that came into contact with potentially contaminated soil with potable water. Contain rinse water.

Personal Protective Equipment (PPE)

PPE decontamination will take place in the decontamination zone as follows:

- Wash boots and gloves with potable water. Contain rinse water. Hang boots to dry.
- Remove boots, gloves, and disposable overalls.
- Place disposable equipment in proper receptacle.
- Respirators (if used), remove filters, and clean by wiping with appropriate disposable moist wipes (alcohol impregnated). Dispose of filters and used wipes.
- Wash hands with soap and water. Contain water.

In addition, decontamination of soil and groundwater sampling equipment will take place as described in Sections 8 and 10 of this CLOSURE PLAN.

SECTION 7

CONFIRMATION SAMPLING PLAN

CONFIRMATION SAMPLING OF STRUCTURES, TANKS, EQUIPMENT

As described previously, all structures, tanks, and equipment associated with the RCRA units have been removed from the site. Soil excavated from the vicinity of the 4,000 gallon UST was containerized. This containerized soil was sampled for waste characterization as described in the Preliminary Feasibility Study, Excavated Soil, Los Angeles County Department of Agricultural Commissioner, 8841 E. Slauson Ave., Pico Rivera, California (SCS, July 20, 1994) and Information on Binned Soils, Former Agricultural Facility, 8841 E. Slauson Ave., Pico Rivera, California (SCS, March 3, 1995). Other confirmation sampling is described in the following section.

SECTION 8

SOIL SAMPLING PLAN

SAMPLING CONDUCTED DURING RFI

Previous site investigation is described in the RFI Report (SCS, July 2001). The RFI report discusses sampling and analytical methods, describes sample locations, quality assurance and quality control (QA/QC) procedures.

Summary of Soil Investigation Results for UST Area

Soil sample locations are shown on Figures 3 and 5. Results of soil sample analyses are presented in Table 4 (RCRA area soil samples, including those in areas where bins of soil excavated from UST area were stored, are highlighted in Tables 4-1 through 4-7).

Pesticides and Herbicides

The following pesticides and herbicides were detected in one or more of the soil samples collected in the UST area (with maximum concentrations detected):

- DDT (up to 110 mg/kg)
- DDE (up to 0.12 mg/kg)
- Chlordane, alpha and gamma forms (up to 15 mg/kg, gamma form)
- Dieldrin (up to 1 mg/kg)
- Heptachlor and heptachlor epoxide (up to 0.19 mg/kg)
- BHC, beta, gamma, and delta forms (up to 30 mg/kg, gamma form)
- Endrin (up to 0.0034 mg/kg)
- Fensulfothion (up to 0.017 mg/kg)
- Ronnel (up to 0.097 mg/kg)
- Chloropyrifos (up to 0.13 mg/kg)
- 2,4-D (up to 1.6 mg/kg)
- Silvex (up to 1.1 mg/kg)
- 2,4,5-T (up to 1.8 mg/kg)
- Dalapon (up to 1.1 mg/kg)

The highest concentrations of pesticides (DDT, BHC, chlordane were the species detected in the highest absolute concentrations) were generally detected at a depth of 15 feet bgs in the immediate vicinity of the former sand trap located east of the former concrete pad and west of the UST. The results of the HRA, summarized in Section 11 of this Closure Plan, show that cumulative cancer risks for the construction worker and adult and child residents are above the DTSC and OEHHA negligible cancer risk threshold of 1×10^{-6}, but within the USEPA target risk range of 1×10^{-6} to 1×10^{-4} which is considered to be safe and protective of human health. The increased potential for cumulative cancer risks to the construction worker and residents is due to potential soil ingestion and dermal contact with dieldrin in soil. Dieldrin was detected in some soil samples collected to depths of 25 feet in the immediate area of the UST.

Other Chemicals

TRPH was not detected in soil samples collected in the former 4,000 gallon UST area.

A trace amount of PCE was detected in one vapor sample in the UST area. The presence of PCE was not confirmed by a duplicate sample collected in the same location. Elevated concentrations of semi-volatile organic compounds were not detected.

Polychlorinated dioxins and furans were detected in a few near-surface soil samples collected in the area of the former concrete pad and an area to the north of this where binned soils from UST excavation had been stored. The compound 2,3,7,8 TCDD, generally considered the most toxic of the dioxin species, was not detected in any sample.

Strychnine was not detected in soil samples collected in the UST area.

Trace metals detected in the UST area were within normal background ranges for native southern California soils. Site specific background concentrations were developed for the trace metal species based on soil samples collected in an area where hazardous substances were not known to have been used (Figure 6). Background concentrations (SCS, February 2005) are as follows:

- Antimony -- limits of quantification.
- Arsenic – 5.59 mg/kg.
- Barium – 54.9 mg/kg.
- Beryllium -- limits of quantification.
- Cadmium – 0.195 mg/kg.
- Chromium – 8.89 mg/kg.
- Cobalt -- 5.36 mg/kg.
- Copper – 14.6 mg/kg.
- Lead – 46.4 mg/kg.
- Mercury -- limits of quantification.
- Molybdenum -- limits of quantification.
- Nickel – 7.65 mg/kg.
- Selenium – limits of quantification.
- Silver -- limits of quantification.
- Thallium – limits of quantification.
- Vanadium -- 17.0 mg/kg.
- Zinc – 74.0 mg/kg.

The methods used to develop these concentrations are described in Appendix E. Metals listed above with background indicated to be "limits of quantification" were not detected in any samples.

Summary of Investigation Results for Other RCRA Units

Storage Container Area

Soil samples were collected at locations SS4, SS5, and BH1 in the vicinity of the sea bin. The only EPA 8080, 8140, and 8150 constituents detected in soil samples from this area were the chlorinated pesticides DDT, detected in the 1-foot depth sample in location BH1 at a relatively low concentration of 0.027 mg/kg, and dalapon, detected in low concentrations in four soil samples at relatively low concentrations of up to 0.59 mg/kg.

One sample contained a relatively low concentration of 190 mg/kg TRPH (SS5-4-1 collected at a depth of 1 foot). Semi-volatile organic compounds and strychnine were not detected. Volatile organics were not detected in soil vapor or soil samples collected during site investigation activities in this area. Trace metals detected were within the normal background ranges for native southern California soils.

Summary of Groundwater Sampling Results

The following summary is based on groundwater samples collected from the on-site monitoring wells (Figure 4) between February 1997 and January 2005. Results of laboratory analysis are summarized in Table 5.

Pesticides and Herbicides

EPA 8080 and 8140 constituents were not detected in any groundwater samples. Two herbicide, dicamba and dinoseb, analyzed by EPA Method 8150 were detected in monitoring wells MW-1 (upgradient) and MW-2 at concentrations of 0.51 and 1.9 μg/l, respectively. During the second round of monitoring, dinoseb was detected in MW-2 at a concentration of 12 ug/l. No pesticides or herbicides have been detected in any samples from monitoring episodes subsequent to the second round.

Other Chemicals

Methyl ethyl ketone (MEK) was detected in groundwater samples collected from monitoring well MW-1 (upgradient) at a concentration of 13 μg/l during the first round of sampling in 1997. No EPA 8260 compounds were detected in monitoring wells MW-2 and MW-3. No other VOCs were detected in any other well during the first monitoring round and no VOCs have been detected in any groundwater samples subsequently.

Strychnine has not been detected in groundwater samples collected at the LPRF.

Trace metals, arsenic, cadmium, copper, lead, mercury, thallium, and zinc, have not been detected in groundwater samples collected beneath the LPRF during most rounds of monitoring. Relatively low concentrations of arsenic, copper, lead, and zinc have been detected in samples collected during a few monitoring rounds. These substances have been detected from the upgradient well and from downgradient wells.

Cations, anions, alkalinity, hardness, and TDS have been detected at ranges generally reported for potable groundwater.

Extent of Impacts

Health risk based cleanup levels have been developed and these have been used to determine an assumed extent of soil remediation that was, in turn, used to as input in developing closure cost estimates. Since the HRA found that the increased potential for cumulative cancer risks was due to potential soil ingestion and dermal contact with dieldrin in soil, cleanup levels were developed for this substance based conservatively on residential site use and a negligible cancer risk threshold of 1×10^{-6}, as described in more detail in Section 11 of this Closure Plan.

The dieldrin cleanup level under this scenario was determined to be 0.034mg/kg.

Based on review of soil sample data soil to a depth of 10 feet bgs in the immediate vicinity of the 4,000 gallon UST contain will require remedial action based on the 1 x 10^{-6} risk level. The soil area requiring remediation has a lateral extent of greatest dimensions approximately 30 feet in a northwest-southeast direction and approximately 15 feet in a southwest-northeast direction (Figure 7). Total volume of soil to be addressed in this area under this scenario would not exceed approximately 100 cubic yards.

Based on the results of monitoring to date, hazardous waste activities do not appear to have resulted in significant groundwater quality impacts. As described in Section 11 of this Closure Plan, vadose zone transport modeling will be conducted to assure determine whether soil contaminants left in place, if any, below a depth of 10 feet, could pose a risk of groundwater quality degradation. If there is significant risk, appropriate corrective action will be conducted.

SAMPLING OBJECTIVES

Section 12 of this Closure Plan describes soil removal activities based on the scenario described above. Confirmation sampling would be conducted in the areas of soil remediation. Assuming remediation consists of soil removal, as described in Section 12, confirmation sampling of soil remaining in the excavations will be conducted. The sampling plan for this effort is described below. The objective of the sampling described will be to confirm that impacted soil in this area has been removed.

Soil samples will be collected when the excavation has reached its deepest planned extent (base and sidewalls of backhoe excavation or, if excavation is by bucket auger from the bottom of selected borings plus borings located around the perimeter) to confirm that the limits of significantly impacted soil have been reached. Samples will be collected from the base and sidewalls of the excavation using a hand-operated drive sampler or drive sampler attached to the bucket auger rig and lowered into the boring on a drill rod. Alternatively, samples will be collected from the backhoe bucket and hollow stem auger or direct push borings located around the periphery of the excavated area. Samples will be collected in metal tubes to be retrieved from the sampler at the surface. The ends of the tubes will be covered with Teflon sheeting, tight-fitting end caps applied, and the caps sealed in place with non-contaminating tape. Sample tubes will be placed in a chilled ice chest for transport to the analytical laboratory. Analysis will be for chlorinated pesticides using EPA Method 8081A. If concentrations of chlorinated pesticides exceeding cleanup levels determined for this project are found in any of the samples, additional excavation may be necessary.

NUMBER AND LOCATIONS OF SAMPLES

Confirmation soil samples will be collected when the planned extent of excavation has been reached. Under the remediation scenario described above, an estimated 15 soil samples would be collected from the base and sidewalls of the excavation. Approximate locations of these samples are indicated on Figure 8.

If confirmation samples indicate concentrations of dieldrin greater than the risk-based cleanup levels, additional excavation, followed by sampling and sample analysis will be conducted. One confirmation sample per 25 square feet of area will be collected from the additional excavation.

SAMPLING PROTOCOLS

The following sections describe protocols that may be employed during collection of soil samples during Closure Plan implementation. Protocols to be used will depend on specific types of sampling chosen based on field conditions.

Grab Sampling

Although primarily intended for soils in the upper 5 feet bgs, soils to a depth as great as approximately 15 feet bgs may be accessed using a hand auger. Samples will be obtained using 2.5-inch diameter by 4-inch long brass sample tubes inside an AMS bulk density sampler driven into the soils using a slide hammer. Each time the sampler is retrieved the sample sleeve will be removed, recorded by the on-site geologist/engineer on the boring log, covered with Teflon sheeting, sealed on both ends with tight-fitting plastic end caps, secured with non-VOC tape, and labeled. Alternatively, soil samples will be collected by driving a metal sampling tube into soil retrieved from the base or sidewall of the excavation on the bucket of a backhoe.

Bucket Auger Soil Borings

Bucket auger or other large diameter borings may be drilled with the purpose of removing impacted soil in the vicinity of the 4,000 gallon UST. Soil samples may be collected from the bottoms of these borings after soil removal to confirm that the depth reached was below the bottom of significantly impacted soil. Samples from bucket auger borings will be taken in areas where the excavation is not in close proximity with a previous sampling location.

If samples are collected this will be conducted by removing the bucket from the borehole, placing 3-inch and/or 6-inch long stainless steel or brass sample sleeves inside a Modified California Split Spoon or similar drive sampler, attaching the sampler to a drive rod, and driving the sampling device into the soils at the base of the bucket auger boring. Each time the sampler is retrieved, a representative sample consisting of an intact sample sleeve will be removed, recorded on the boring log, covered with a Teflon sheet, sealed on both ends with tight-fitting plastic end caps, secured with non-VOC tape, and labeled.

Soil Borings

Soil borings may be drilled using truck-mounted hollow-stem auger equipment in areas adjacent to excavations or through excavation backfill. Soil samples will be collected by placing 3-inch and/or 6-inch long stainless steel or brass sample sleeves inside a hand operated drive sampler or California split spoon sampler and driving the sampling device into the soils. Each time the sampler is retrieved, a representative sample consisting of an intact sample sleeve will be removed, recorded on the boring log, covered with a Teflon sheet, sealed on both ends with tight-fitting plastic end caps, secured with non-VOC tape, and labeled. Soil samples may also be collected using a continuous coring device and subsampling the continuous. Subsamples would be handled in the same manner as the other soil samples from borings.

Soils to be sampled may also be accessed using direct push drilling methods. In this case a truck mounted, hydraulically operated direct push drilling rig would be mobilized to the site. This type of rig uses direct and vibratory pressure to push steel drill rods to the sampling depth and to collect soil samples in approximately l-inch diameter tubes. Samples retrieved will be handled in essentially the same manner as described above.

Sample Handling

Sealed samples will be placed into an ice chest as soon after acquisition as possible and kept cool with ice. Samples will be transported to a State certified analytical laboratory at the end of each day's sampling under proper chain-of-custody.

FIELD QUALITY CONTROL

Sample Numbers

Closure Plan samples will be designated using the following formats:

- SSC# - depth, where "SSC" indicates that the sample is a Closure Plan surface sample, # is a number indicating the specific sampling location, and "depth" is the depth of the sample in feet bgs.

- BAC# - depth, where "BAC" indicates that the sample is a Closure Plan bucket auger sample, # is a number indicating the specific sampling location, and "depth" is the depth of the sample in feet bgs.

- BHC# - depth, where "BHC" indicates that the sample is a Closure Plan soil boring sample, # is a number indicating the specific boring, and x is the depth of the sample in feet bgs.

Duplicate Samples

In order to check the precision and accuracy of laboratory analyses, duplicate samples will be collected in numbers equivalent to approximately 10 percent of the total number of soil samples during the Closure Plan implementation. Soil duplicates (co-located samples) will be obtained from borings by collecting two adjacent sample sleeves.

DECONTAMINATION OF SAMPLING EQUIPMENT

Sampling equipment will, in general, be decontaminated in the following manner:

- Rinse with a solution of laboratory-grade detergent (Liquinox) and tap water. Scrub, if necessary, to remove dirt or other materials adhering to the sampling device.

- Tap water rinse.

- Double rinse with purified water

If the sampling device is set down prior to sample collection, it will be placed on a clean plastic sheet. If a sample needs to be removed by hand, a new disposable glove will be used for each sample. All rinse water and used disposable equipment will be containerized, labeled, and retained on site until determination of proper disposal methods.

HEALTH AND SAFETY PROCEDURES

Appropriate Health and Safety precautions/procedures will be followed as outlined in SCS Engineers' Revised Health and Safety Plan (February 1995) for the LPRF. All site personnel involved in sampling or other contact with potentially hazardous materials will read the Health and Safety Plan prior to initiation of field work. A copy of the Health and Safety Plan will be on-site during RFI involving contact with potentially hazardous substances.

CHAIN-OF-CUSTODY PROCEDURES

Sample custody will be initiated at the time of sample collection by placing a label on the sample container and filling out a chain-of-custody form. Each collected sample is entered on a line of the chain-of-custody form. It is the responsibility of the person collecting the samples to ensure that the descriptive information on the chain-of-custody form is accurate and complete. When samples leave the possession of the person who collected them, the chain-of-custody form is signed by that person and the person to whom sample possession is conveyed. Each individual who subsequently takes possession of the samples signs, dates, and indicates the time at which the transfer occurred. Sample condition is noted and recorded by laboratory personnel when the samples were delivered to the laboratory.

DOCUMENTATION

Samples will be identified with a label. Each label will be completely and legibly filled out by the person collecting the sample using waterproof ink. Sample labels will include the following information:

- Project name and/or code.
- Unique sample identification
- Date of collection.

Field activities will be documented in a field log book. The following information will be recorded:

- Daily log of activities performed.
- Personnel on site each day.
- General weather conditions.
- Deviations from Closure Plan.
- Descriptions of accidents or other health and safety problems.
- Samples collected, including date.
- Other information, including sample details, photographs, etc.
- General observations.

Logs will be completed by the field geologist/engineer for each boring and excavation and will contain the following information:

- Soils description consistent with the Unified Soils Classification.
- Description of soil texture, color, density, odors, and other observations.
- Blow counts for every 6 inches of sample drive (hollow stem auger borings only).
- Sampling depths and locations and sample identification numbers.
- Estimated soil moisture (narrative description).
- Total depth.

Closure reports will contain summaries of field observations as well as boring logs and chain-of-custody forms.

SECTION 9

ANALYTICAL TEST METHODS

LABORATORY PROCEDURES

Soil Samples

Confirmation soil samples will be analyzed for chlorinated pesticides using EPA Method 8081A. If concentrations of dieldrin above target levels are left in place below 10 feet bgs, soil samples will also be tested for physical parameters as specified in Section 11.

Water Samples

Analytical methods to be used include pesticides and herbicides using EPA Methods 8081A, 8141A, and 8151A, and selected metals (arsenic, cadmium, copper, lead, mercury, thallium, and zinc). In addition, field parameters, including pH, specific conductance (EC), temperature, and turbidity, are measured during groundwater sampling episodes.

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

The purpose of laboratory quality control is to provide a measure of the precision and accuracy of analytical methods. These controls involve checks of reagents used, the analytical methods employed, and the quantification procedures for each analytical method. Duplicate samples taken and sent to the laboratory also serve as a check on laboratory accuracy. The laboratories to be performing analyses are certified by the State of California Department of Health Services to perform the analyses identified in the project protocol.

Internal laboratory QA/QC procedures will include the following:

- Laboratory chain-of-custody tracking of samples, including description of sample condition upon receipt, recording of sample receipt in the laboratory log, documenting steps in the analytical process, and recording results of analyses.
- Instrument calibration using calibration check standards and laboratory blanks.
- Use of reagent and method blanks.
- Replicates (one every 20 samples).
- QC spike samples (one every 20 samples).
- Matrix spike samples (one every 20 samples).
- Laboratory split sample duplicates (one every 20 samples).
- Laboratory check standards (one every 20 samples).

SECTION 10

GROUNDWATER SAMPLING

SAMPLING OBJECTIVES

The purpose of water sampling is to determine if hazardous wastes or other constituents, including pesticides or herbicides, have migrated to groundwater from the RCRA regulated units. This sampling is part of an ongoing groundwater monitoring program. The existing site wells have been monitored quarterly since 1997. Due to fluctuations in water level, during some periods insufficient water was present in the monitoring wells to collect samples. Sampling was completed for the following calendar quarters: first, second, and third 1997; first 1998; first 1999; first, second, and third 2000; second 2001; and second 2003. After installation of deeper, replacement wells, sampling was completed in the following calendar quarters: second 2003, first and second 2004, and first 2005.

Based on groundwater monitoring results to date, RCRA regulated activities do not appear to have resulted in significant groundwater quality impacts. In a letter dated March 24, 2005, DTSC recommended that groundwater monitoring be discontinued.

NUMBER AND LOCATIONS OF SAMPLES

Three pairs of groundwater monitoring wells exist at the site (Figure 3). These well pairs are located upgradient (MW-1/MW-1D) or downgradient of the 4,000 gallon UST (MW-2/MW-2D) and of the cesspool (MW-3/MW-3D). A shallower well, of total depth approximately 55 feet, was installed in 1997. The installation of a second, deeper well was necessitated by the fact that regional groundwater elevation had dropped to the point that sampling from the original wells was impractical most of the time. Depending on water elevation, one or the other set of wells is sampled during each episode of groundwater monitoring. Construction details of each well are summarized in Table 3.

FIELD SAMPLING METHODS

Prior to sampling, static water level measurements are taken in all wells using a standard water level indicator. Readings are taken to the nearest 0.01 foot from a known reference point on the well casing. The water level indicator is cleaned between each well using a biodegradable detergent (Liquinox) and fresh water wash followed by a distilled water rinse.

Following the groundwater level measurements, the wells are purged to allow collection of samples representative of aquifer fluids. Well purging has been conducted using a Grundfos Redi-Flo 2 submersible pump, by hand bailing, or using a QED bladder pump. Using the former two "traditional" methods, wells are pumped until at least three well volumes of water are removed from the well, or the well goes dry, and pH, temperature, conductivity, and dissolved oxygen readings stabilize. Turbidity measurements are also taken periodically during purging. Alternatively, "micropurge" methods have been used and are anticipated to be employed in the future. Micropurge methods involve setting a low flow (bladder) pump at a point approximately midway in the screened portion of the aquifer and purging at a flow rate generally less than 0.5 liters per minute until the field parameters listed above have stabilized. Whichever purging method is used, field notations are made as to odor and color of the water being removed by the pump and temperature, conductivity, dissolved oxygen, turbidity, and pH readings are recorded.

After each well is purged, groundwater samples for non-volatile analyses are collected by reducing the pump flow rate to approximately 0.25 gallons per minute or less and collecting from the pump discharge. Analyses for volatile organics are collected by lowering a disposable polyethylene bailer into the well following pump removal or from the pump discharge.

QUALITY CONTROL

Samples

A duplicate water sample from one of the wells is collected on an approximately annual basis.

Field Documentation

Field documentation for groundwater monitoring consists of the following:

- Sample labels, properly completed.
- Chain-of-custody documentation.
- Completion of field sampling forms for each well monitored.
- Other documentation, as appropriate.

Groundwater monitoring reports are prepared for each quarter when samples are collected. Letters document field information collected when insufficient water is present to collect samples. Field sampling forms are appended to groundwater monitoring reports.

DECONTAMINATION OF SAMPLING EQUIPMENT

Non-disposable water sampling equipment will be decontaminated in the following manner:

- Rinse with a solution of laboratory-grade detergent (Liquinox) and tap water.
- Tap water rinse.
- Rinse with purified water

Rinsing is accomplished by placing the purge pump in the specified solution and operating the pump for sufficient time for several changes of water to have run through the purge tubing. New purge tubing is used for each round of monitoring and tubing is discarded at the end of each sampling episode.

If the sampling device is set down prior to sample collection, it will be placed on a clean plastic sheet. If a sample needs to be removed by hand, new disposable gloves will be used for each sample.

All rinse water and used disposable equipment will be containerized, labeled, and retained on site until determination of proper disposal methods.

CHAIN-OF-CUSTODY PROCEDURES

Sample custody will be initiated at the time of sample collection by placing a label on the sample container and filling out a chain-of-custody form. Each collected sample is entered on a line of the chain-of-custody form. It is the responsibility of the person collecting the samples to ensure that the descriptive information on the chain-of-custody form is accurate and complete. When samples leave the possession of the person who collected them, the chain-of-custody form is signed by that person and the person to whom sample possession is conveyed. Each individual who subsequently takes possession of the samples signs, dates, and indicates the time at which the transfer occurred. Sample condition is noted and recorded by laboratory personnel when the samples were delivered to the laboratory.

SAMPLE HANDLING

Samples are placed into pre-cleaned sample bottles supplied by the laboratories. Immediately upon collection, samples are labeled and logged. Samples are handled as described above for confirmation soil samples. Purge water is sealed in 55-gallon drums, labeled, characterized, and properly disposed.

SECTION 11

CLOSURE PERFORMANCE STANDARDS

DETERMINATION OF CLEANUP CONCENTRATIONS

The goal of the Closure Plan is to achieve clean closure for both soil and groundwater based on: (1) background concentrations for inorganic and non-detect levels for man-made organic chemicals, or (2) DTSC's approved health risk based concentrations. In this regard, a baseline HRA (SCS, January 2006; copy in Appendix F) was completed to determine (1) whether concentrations of potentially hazardous chemicals in soils remaining on site may pose an unacceptable risk, and (2) if so, what concentrations of target chemicals can remain in place and not pose an unacceptable risk under the most health conservative assumptions.

SUMMARY OF HEALTH RISK ASSESSMENT

The HRA evaluated potential exposures to construction workers and potential adult and child residents. The following exposure pathways were evaluated depending on the receptor population: soil ingestion, dermal contact with soil, inhalation of soil particulates and volatiles released from soil. In addition, the vapor intrusion exposure pathway was evaluated for the adult and child residents. This pathway is not a concern for construction workers since this is an indoor pathway and construction workers are assumed to be working outdoors. Both cancer and non-cancer health risks were evaluated.

The risk assessment methods used in the HRA were selected first to be consistent with recommendations of the California regulatory agencies primarily responsible for reviewing site risk assessments in California. These agencies include the DTSC and the California Office of Environmental Health Hazard Assessment (OEHHA). If risk guidance was not available from the California agencies for some aspect of the risk assessment, recommendations of the United States Environmental Protection Agency were selected.

The results of the HRA show that cumulative cancer risks for the construction worker and adult and child residents are above the DTSC and OEHHA negligible cancer risk threshold of 1×10^{-6}, but within the USEPA target risk range of 1×10^{-6} to 1×10^{-4} which is considered to be safe and protective of human health. The increased potential for cumulative cancer risks to the construction worker and residents is due to potential soil ingestion and dermal contact with dieldrin in soil. Cumulative non-cancer risks for the construction worker, adult and child residents are all below the Hazard Index threshold of 1, indicating that potential exposures are not expected to result in adverse health effects.

Using the California Department of Toxic Substances Control Leadspread model to evaluate lead risks for on-site resident lead exposure; lead risks are considered insignificant. The USEPA Adult Lead Methodology model was used to assess risk from on-site exposure to lead for the construction worker. Lead risks are also considered insignificant for the construction worker.

HEALTH RISK BASED CLEANUP LEVEL

Soil Cleanup Level

The HRA found that the increased potential for cumulative cancer risks was due to potential soil ingestion and dermal contact with dieldrin in soil. Cleanup levels were developed for this substance based conservatively on residential site use and the negligible cancer risk threshold of 1×10^{-6}, as described above. The dieldrin cleanup level under this scenario was determined to be 0.034 mg/kg. Equations used in the calculation are included in Appendix G.

Calculations in the HRA, and determination of the cleanup level, were based on a standard scenario that considers potential ingestion and dermal contact in the upper 10 feet of the soil column only. In order to fulfill the objectives stated above, all soil to a depth of 10 feet below ground surface impacted by contaminant concentrations that exceed the cleanup level will be removed. Although soil impacted by contaminant concentrations that exceed the cleanup level located below the 10-foot depth do not present a significant health risk, if impacted deeper soils are left in place, risk associated with impacted soils will be evaluated to determine whether any further action is required.

Protection of Groundwater

In addition, if soil with dieldrin concentration above the cleanup level is left in place below a depth of 10 feet, vadose zone migration modeling will be conducted to assure that groundwater quality is protected. Modeling will employ the USEPA approved SESOIL software. SESOIL includes assumptions about environmental fate processes, the handling of temporal and spatial variations, and the applicability to different fate and transport scenarios. The user must specify climatic conditions and chemical specific information, both available from the published literature, and contaminant concentrations, to be developed based on site specific sample data. In addition, soil parameters, including bulk density, permeability, effective porosity, total organic carbon content (TOC), and cation exchange capacity, will be determined based on samples collected during the remediation phase of closure. Test methods to be employed to determine soil parameters include ASTM D2937 for bulk soil density, ASTM D5084 for permeability, ASTM D425 for porosity, EPA Method 415.1 for TOC, and EPA Method 9081 for cation exchange capacity. Two samples will be collected for soil parameter analysis for each major soil type encountered during excavation (estimated 4 samples total).

SECTION 12

SOIL REMOVAL/CLEANUP PROCEDURES

CLEANUP OBJECTIVES

As indicated in the previous section, cleanup concentrations were developed based on health risk assessment. The remediation scenarios presented below involving removal of soils in the vicinity of the former 4,000 gallon UST and off site transport for treatment and/or disposal.

PROPOSED REMOVAL OF CONTAMINATED SOIL

Background and Objectives

As indicated in Section 12, cleanup levels were developed for dieldrin. Based conservatively on residential site use and a negligible cancer risk threshold of 1×10^{-6}, the dieldrin cleanup level for soils above 10 feet in depth was determined to be 0.034 mg/kg. Sampling has indicated that soil with dieldrin concentrations exceeding this level exist in the immediate vicinity of the 4,000 gallon UST, in particular in an area west and south of the former UST with greatest dimensions approximately 30 feet northwest-southeast, by approximately 15 feet southwest-northeast. In addition soil may be removed to a depth as great as 20 feet in the central portion of this area (Figure 7) where 4,4-DDT at concentrations of 97 to 110 mg/kg were detected in samples from borings BH-9 and BH-13. Although dieldrin was not detected in these samples, laboratory reporting limits were relatively high due to sample dilution required by the elevated DDT concentrations. Figure 9 provides a cross section through the proposed removal area. Total volume of soil excavated in this area would not exceed approximately 100 cubic yards.

Based on the location and projected amounts of soil requiring corrective action, as discussed above, several clean up alternatives were evaluated. For cost estimating purposes, the preferred alternative for soil removal will consist, in general terms, of backhoe excavation or, if significant caving occurs during shallow soil excavation, drilling a series of large-diameter auger boreholes in order to remove a series of adjacent cylinders of soil. After drilling, boreholes will be backfilled with clean sand-cement slurry. Soil removed will be containerized. Containerized material will be sampled and tested to determine proper disposition. Containerized soil will be transported off site for treatment and/or disposal. Confirmation samples will be collected from the bottom of the excavation.

Proposed Removal Action Protocols

Backhoe Excavation Option

Shallower excavations will be conducted using a backhoe. Deeper excavations may also be conducted using a backhoe if caving of soil does not prevent this.

A backhoe will be mobilized to the site and used to remove soil from the excavation. Excavated soil will be placed directly in a container with a closing top or will be temporarily stockpiled on plastic sheeting and then either placed in a container or using a loader or employed as backfill. Stockpiling on plastic sheeting is anticipated only for apparently unimpacted overburden soils. After completion of excavation the area of soil removal will be backfilled with clean compacted soil.

Large Diameter Auger Excavation Option

If necessary due to caving, a bucket auger or open flight auger rig will be used to drill a series of large diameter boreholes (estimated 36 inch diameter) to a depth as great as 20 feet below grade, removing impacted soil throughout the subject area in a "cookie-cutter" manner. Approximately 20 boreholes will be required to cover the area where deeper soil samples indicated concentrations of dieldrin greater than the calculated cleanup level.

A series of boreholes will be cut in a triangular shape on the first, second, and third days of excavation, leaving intervening areas undrilled. Following each day's excavation, boreholes will be backfilled with quick curing sand/cement slurry, which will be allowed to set overnight. Once set, this slurry will provide support for another set of boreholes, placed in between the first set. This methodology will also minimize structural stability concerns regarding the adjacent building. A similar procedure will be followed after the first three days until the work is completed.

Although the bulk of impacted soil will be removed, it should be noted that a small amount impacted soils may be left in place between adjacent borings, and, if necessary, to protect the structural stability of the nearby building.

Upon excavation, a loader will transport impacted soil to on-site soil bins, arranged by depth and possibly borehole location (based on results of previous soil sampling and analysis), segregating clean (overburden) soils and, if practical, soils with differing levels of impacts.

Disposition of Excavated Soil

One composite sample will be collected from each of the bins for soil characterization prior to loading and removal to a disposal/recycling facility. Samples will be analyzed for chlorinated pesticides using EPA Method 8081A. Based on the disposal requirements of the facility receiving the soil, samples may also be subject to additional testing, for instance TCLP extraction/analysis of extract for chlorinated pesticides.

After characterization and acceptance by receiving facility, soil bins will be transported to the facility for treatment and/or disposal. It is possible that soil will be sent to more than one facility. Once receiving facilities have been identified, this information will be transmitted to DTSC. An estimated six to ten truckloads of soil will be taken off site.

Engineering Controls

During excavation operations, dust will be controlled by the use of a water spray, as deemed necessary. Drilling rigs, front-end loaders, backhoes, and trucks may be utilized in the excavation and transport of the impacted soil. In the event of significant precipitation, the excavation area, will be surrounded with a berm (i.e., sand bag or dirt) to minimize runon and runoff.

SCS personnel will provide oversight for excavation operations. SCS staff will be on site at all times during operations to assist in identifying impacted soils, through visual observations, and to collect samples for laboratory testing. The existing site health and safety plan will be modified to include the soil removal operations anticipated.

PROCEDURES TO CONFIRM THAT OBJECTIVES HAVE BEEN MET

Soil will be sampled and analyzed to confirm that removals have met cleanup objectives. Soil sampling protocols are described in Section 8 above and laboratory protocols in Section 9.

SECTION 13

CLOSURE COST ESTIMATE

DESCRIPTION AND CLOSURE STEPS

Closure, for which costs are estimated, is assumed to include the following items:

- Soil excavation and backfilling, in the area of the former 4,000-gallon UST, as described in Section 12 of this Closure Plan, and confirmation sampling, as described in Section 8.
- Oversight and closure reporting.
- Laboratory analysis, as described in Section 9 of this Closure Plan.
- Containerization, characterization, and off site disposition of soil.

No inventory reduction is included in the above because there is no contained waste remaining on the site. Removal of waste containment structures is also not included because these no longer remain on site.

COST ESTIMATE USING UNIT COSTS

Attached Table 6-1 lists closure cost items and provides unit and total costs. Largest cost items include excavation and soil treatment/disposal. This latter item, in particular, is sensitive to the amount of soil excavated and send off site for treatment/disposal.

Table 6-2 provides the high and low estimates of quantities (numbers, days, volumes, etc.) and unit costs used to develop the numbers appearing in Table 6-1. The following quantities should be noted in relation to development of cost estimates:

- Number of confirmation soil samples, 30 to 40.
- Number of physical characterization soil samples (for SESOIL modeling), 0 to 4.
- Number of characterization soil samples (bin samples), 6 to 10 composites.
- Number of bins on site, 6 to 10.
- Amount of soil for off-site treatment/disposal, 145 to 225 tons (of which 5 to 25 tons is hazardous. Facilities potentially receiving soil are listed in Section 8.

SECTION 14

FINANCIAL RESPONSIBILITY

METHOD OF ASSURING FINANCIAL RESPONSIBILITY

Based on the parameters outlined in Section 13, the estimate of closure cost is $88,554 to $189,759. The cost estimates include an added 20 percent contingency. Closure cost will be the responsibility of the site owner. LACDAC will comply with financial assurance within 18 months following the approval of the Closure Plan.

SECTION 15

CLOSURE IMPLEMENTATION SCHEDULE

SCHEDULE

Table 7 provides the projected closure schedule for the LACDAC facility. Closure is anticipated to be complete within 180 days, or approximately 6 months, of approval of the permit modification. LACDAC will notify DTSC of any modification to the schedule a minimum of two weeks in advance.

SECTION 16

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USEPA; 1989. RCRA Facility Investigation (RFI) Guidance, Interim Final, SW 89-031.

USEPA; 1992. RCRA Ground-Water Monitoring, Draft Technical Guidance, 530-R-93-01.

US Geological Survey; 1965 (photorevised 1981). Whittier California, 7.5 Minute, Topographic Map.

FIGURES

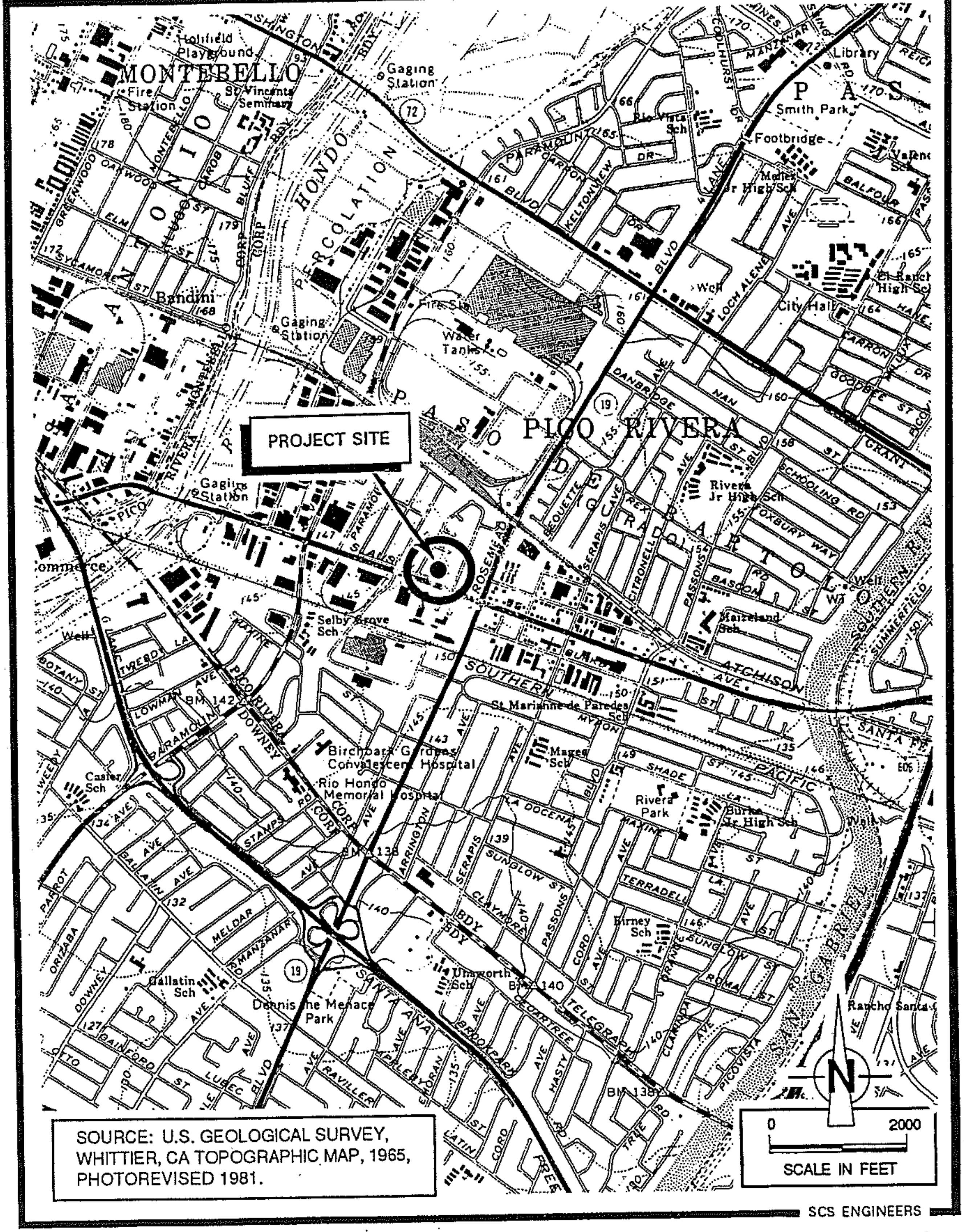


Figure 1. Project Site Location, Los Angeles County Department of Agricultural Commissioner, Pico Rivera Facility, 8841 E. Slauson Ave., Pico Rivera, CA.

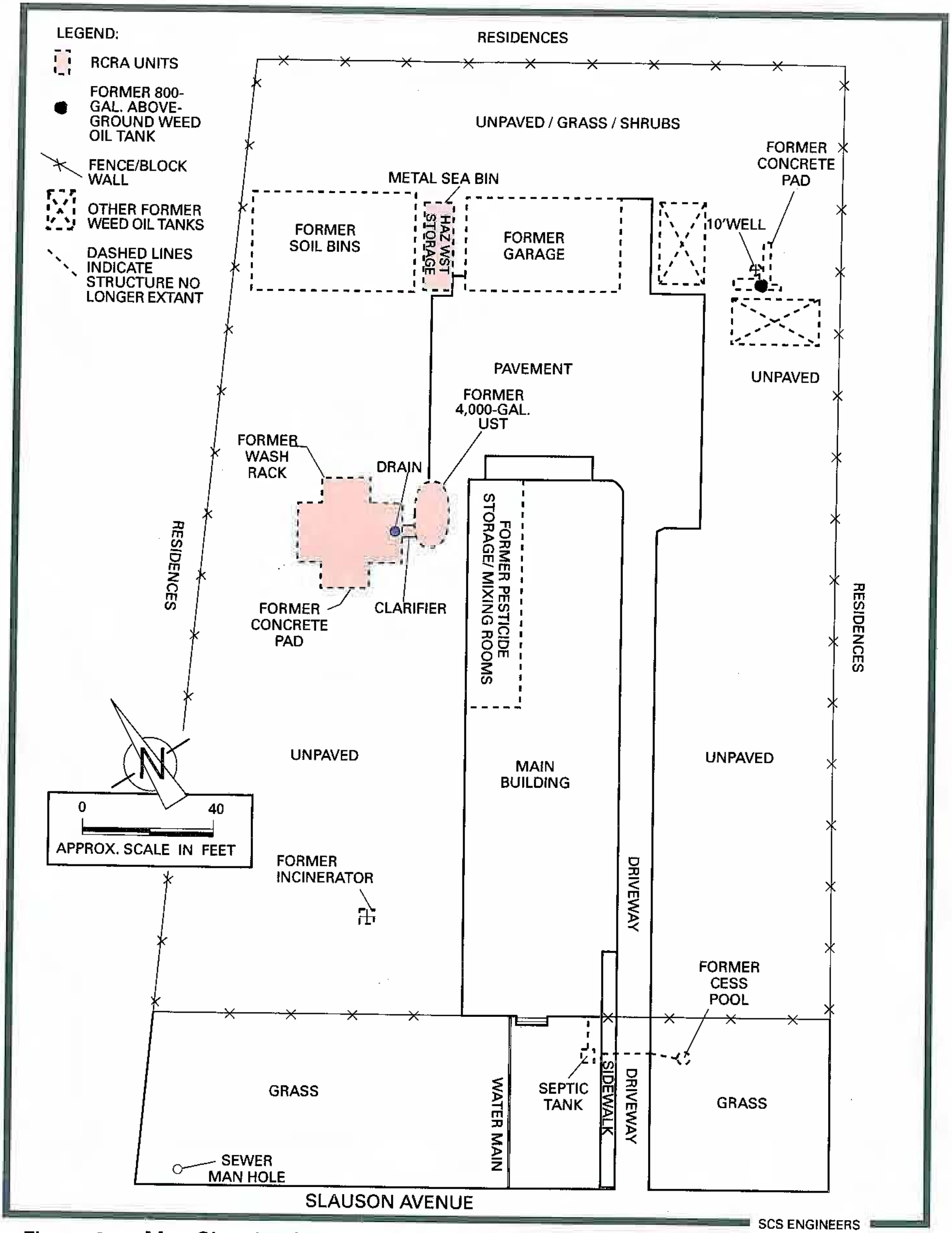


Figure 2. Map Showing Location of Facilities, Los Angeles County Department of Agricultural Commissioner/Weights and Measures, 8841 E. Slauson Ave., Pico Rivera, CA.

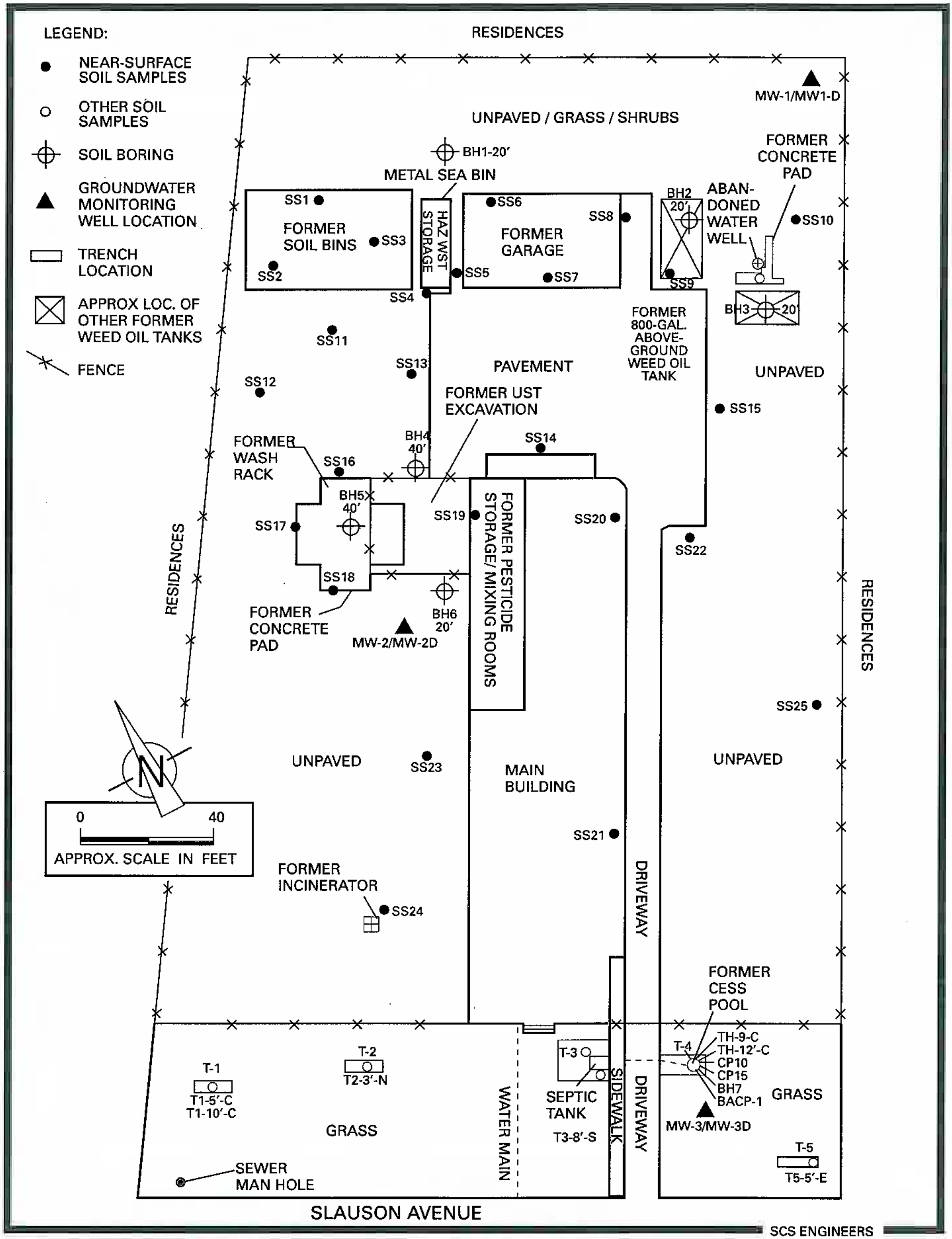


Figure 3. Map Showing Soil Sampling Locations and Groundwater Monitoring Well Locations, Los Angeles County Department of Agricultural Commissioner, Pico Rivera Facility, 8841 E. Slauson Ave., Pico Rivera, CA. (See Figure 6 for enlargement of 400-gallon UST area.)

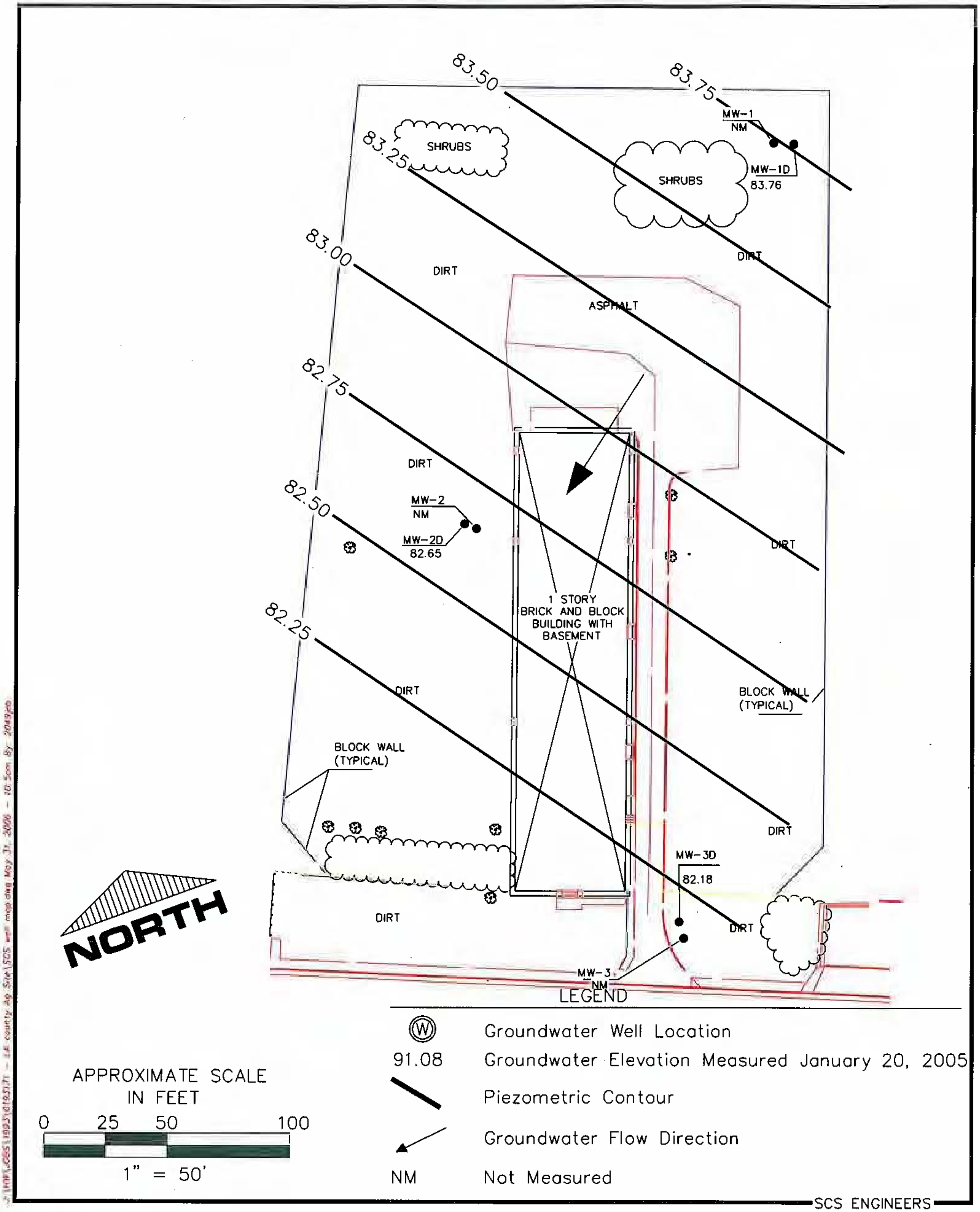


Figure 4. Groundwater Contour Map, 8841 East Slauson Avenue, Pico Rivera, CA

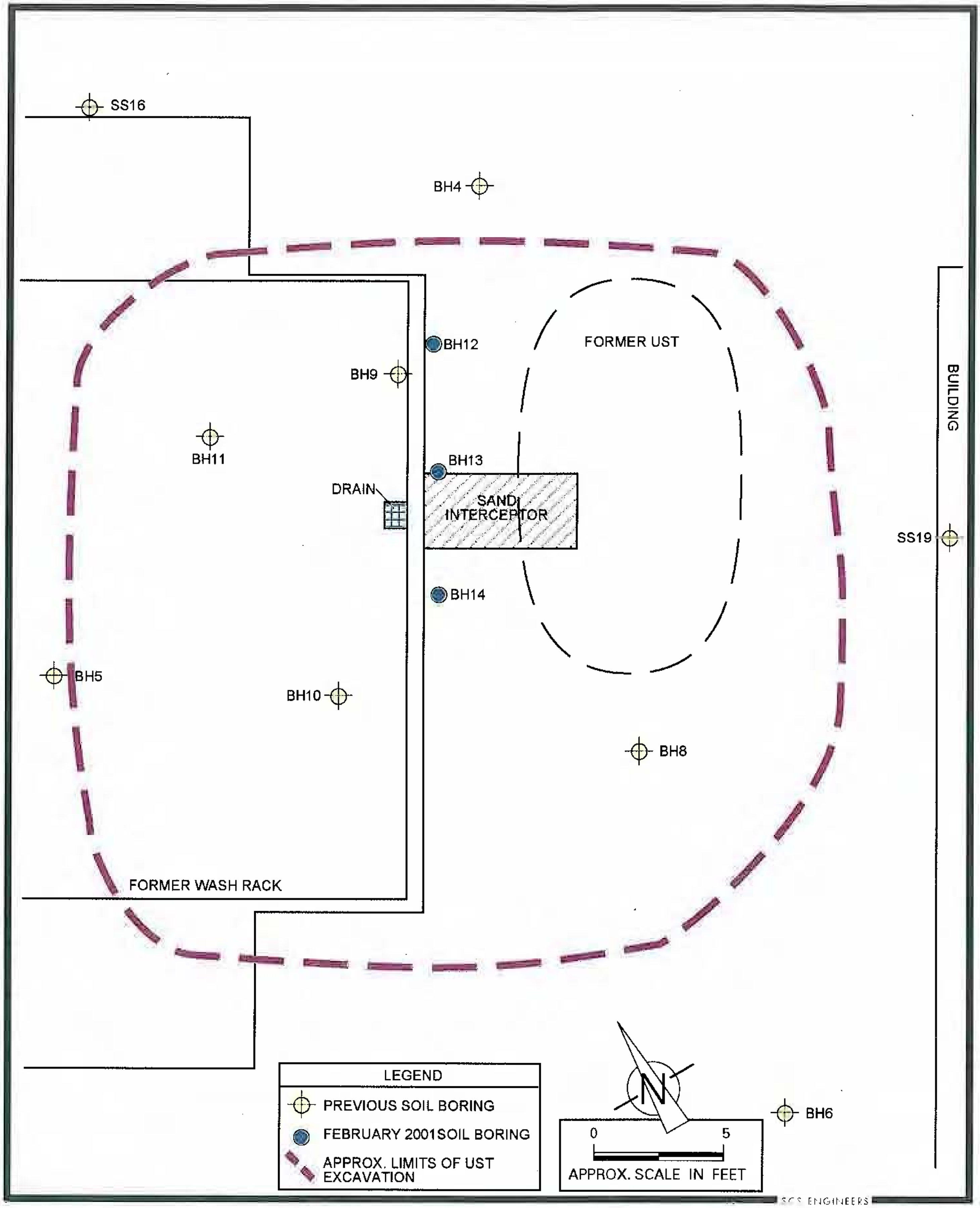


Figure 5. Map of Soil Borings in Vicinity of Former Wash Rack and Underground Storage Tank (UST), Los Angeles County Department of Agricultural Commissioner, Pico Rivera, CA.

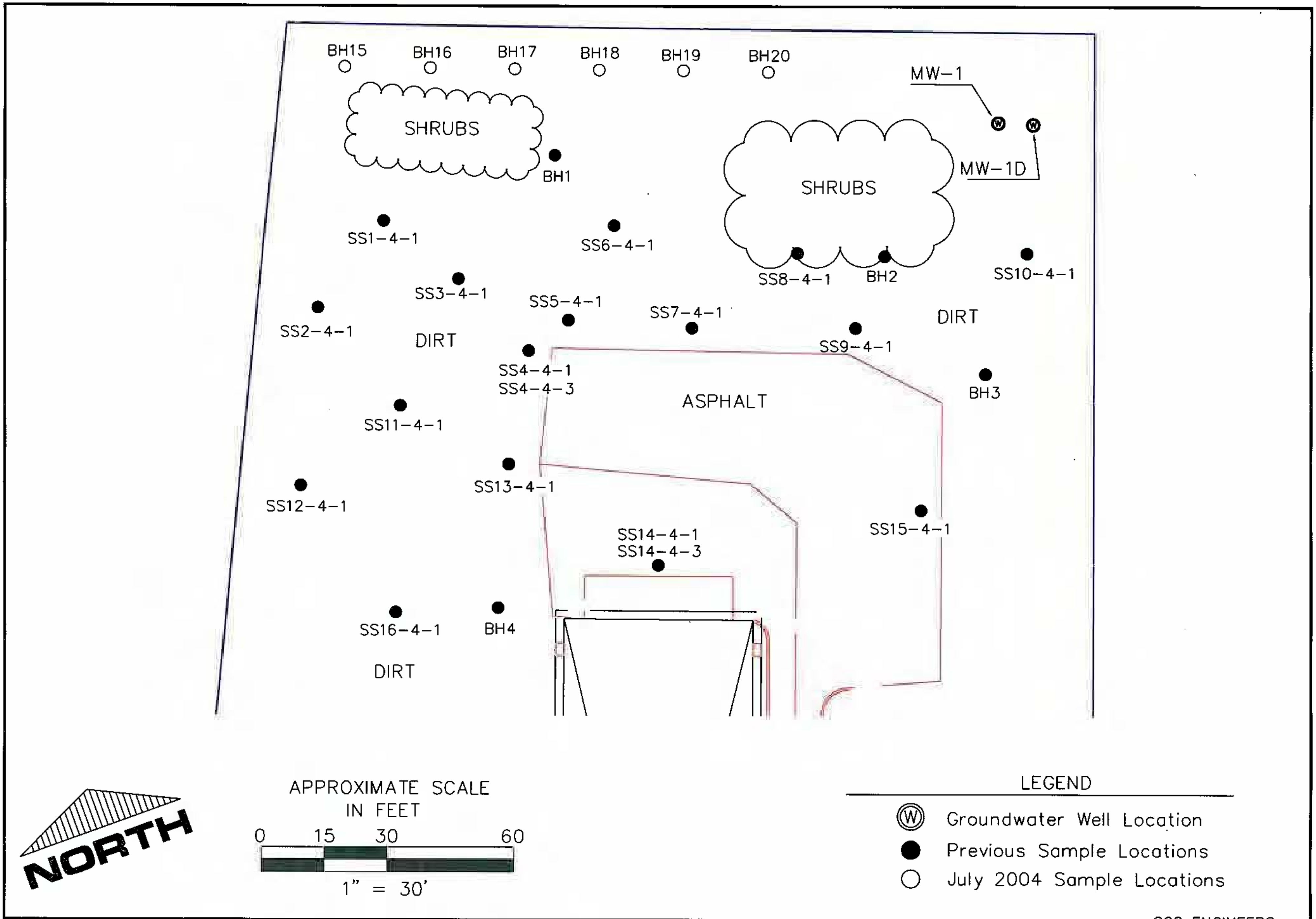


Figure 6. Map Showing Background Soil Sampling Locations, Los Angeles County Department of Agriculture Commisioner/Weights and Measures, 8841 East Slauson Avenue, Pico Rivera, CA

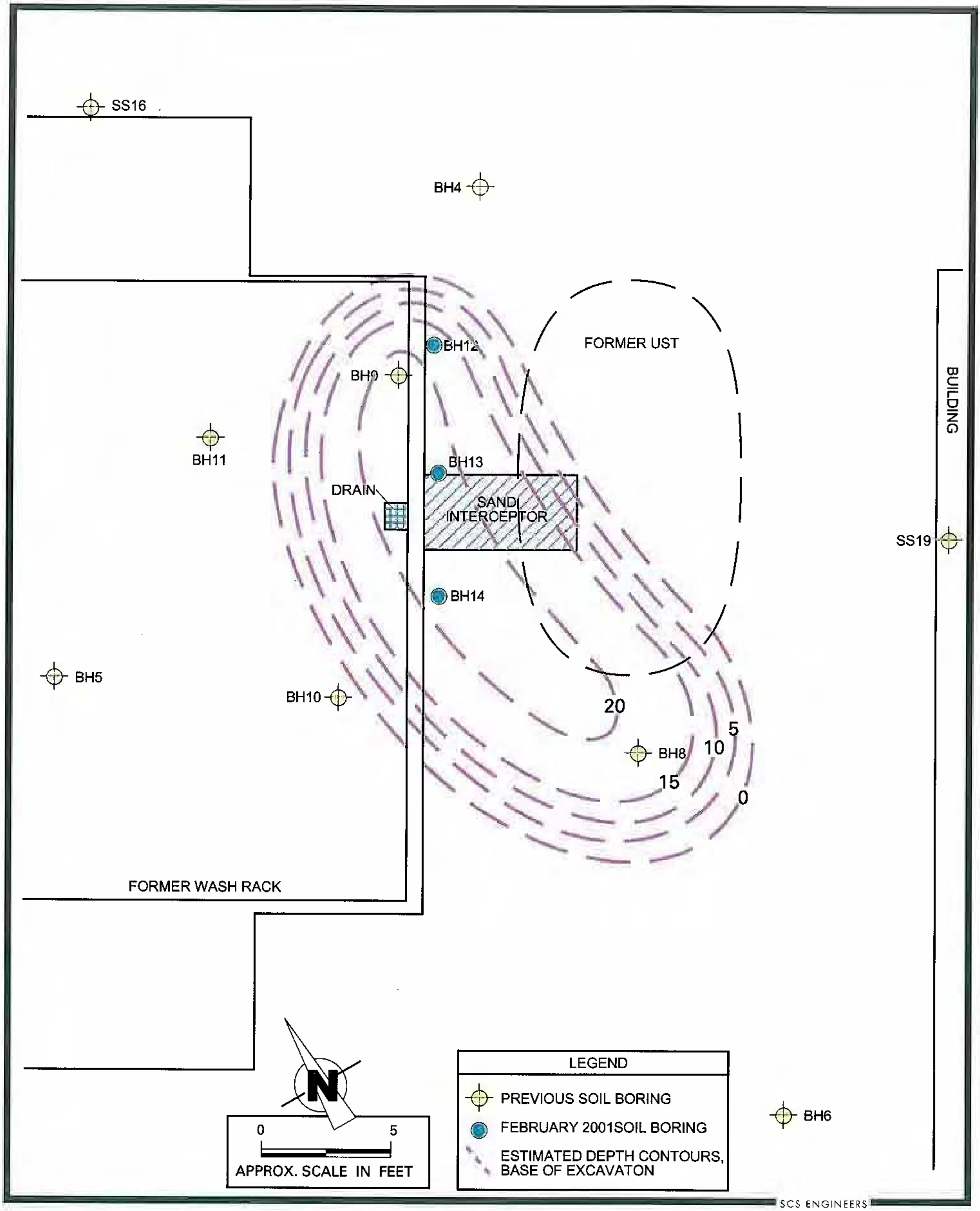


Figure 7. Map of Soil Borings in Vicinity of Former Wash Rack and Underground Storage Tank (UST) Showing Approximate Area of Soil Removal Under a $1X10^{-6}$ Risk Scenario, Los Angeles County Department of Agricultural Commissioner, Pico Rivera, CA.

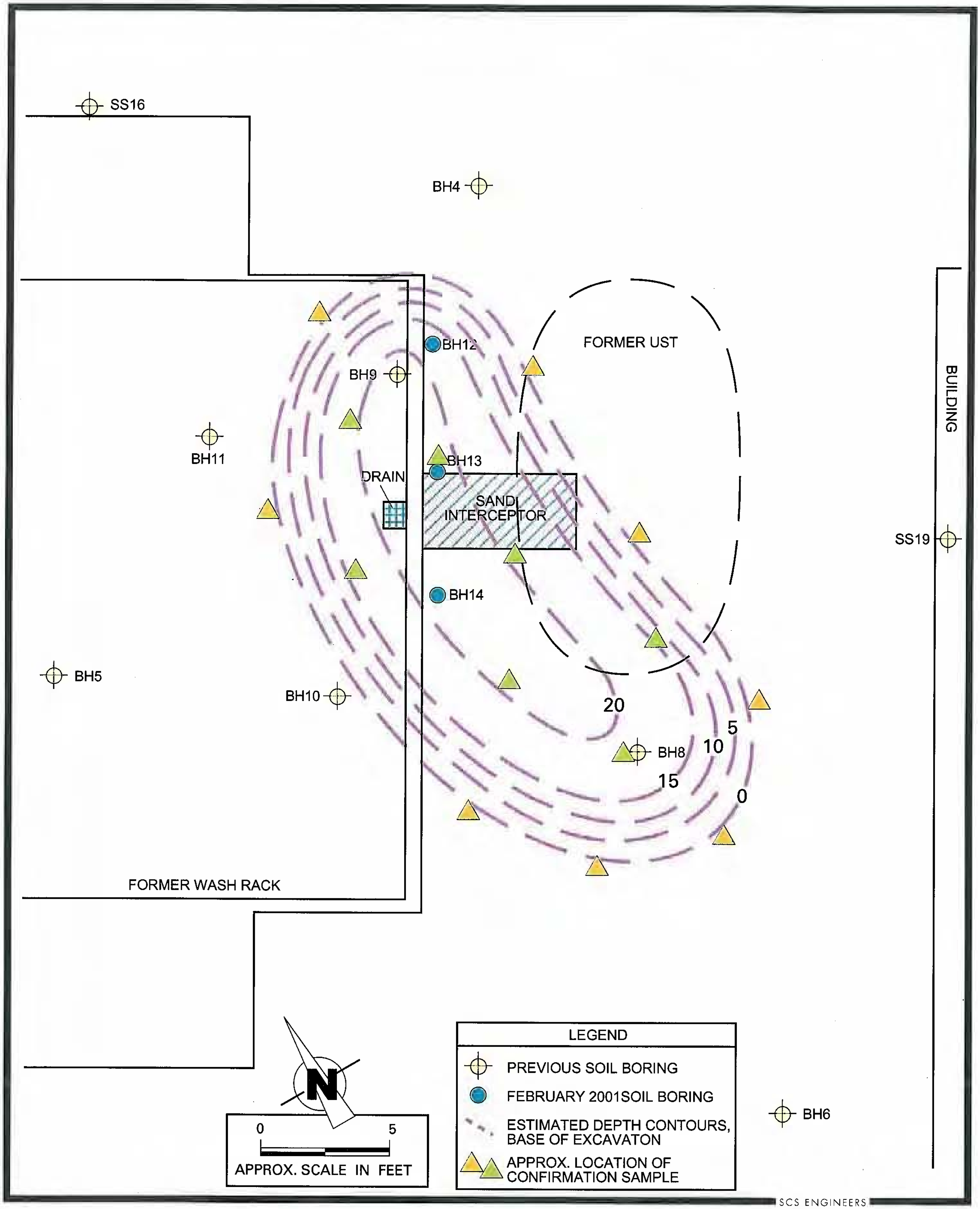
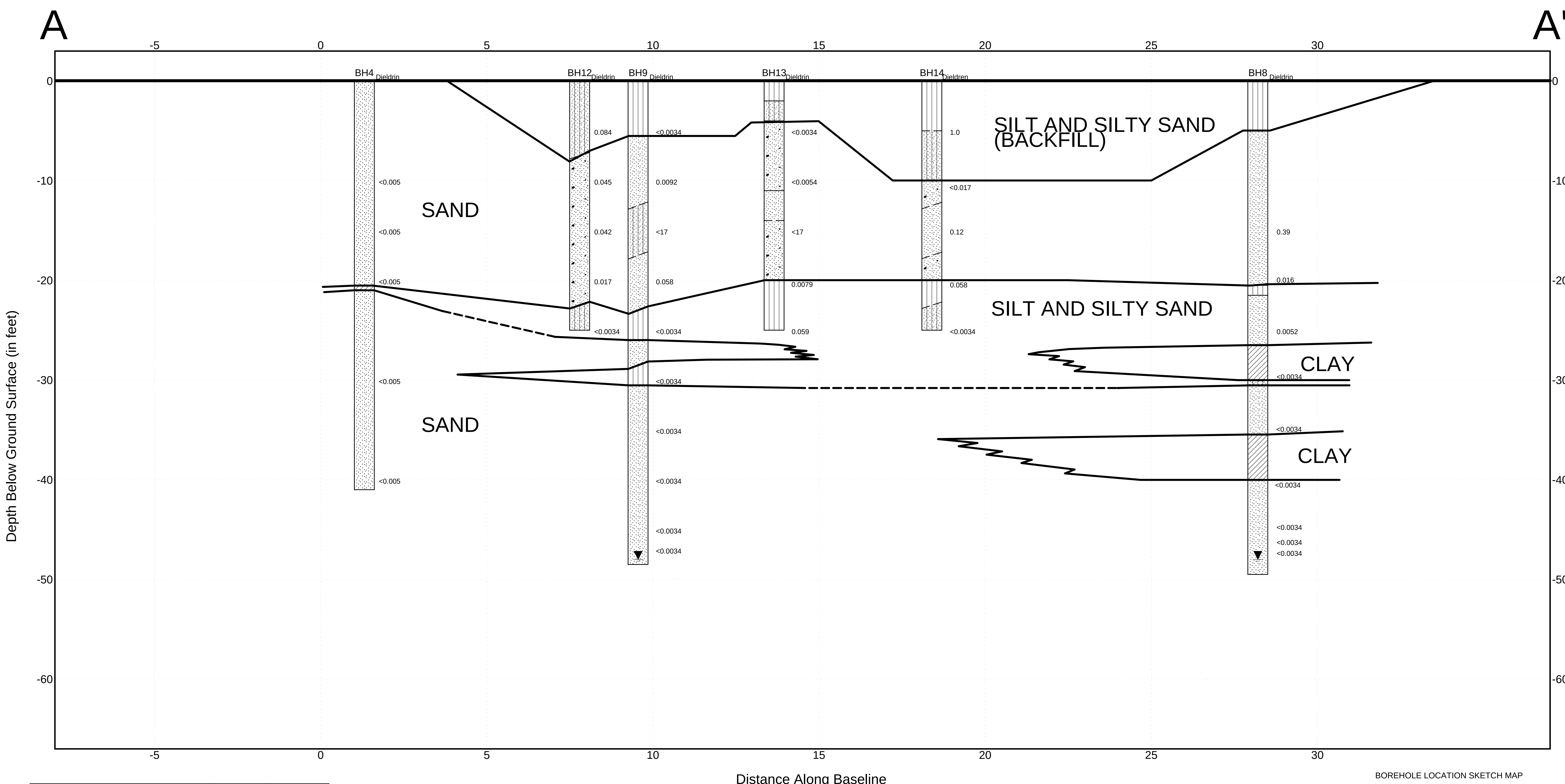


Figure 8. Map of Area of Soil Borings in Vicinity of Former Wash Rack and Underground Storage Tank (UST) with Proposed Confirmation Soil Sample Locations, Los Angeles County Department of Agricultural Commissioner, Pico Rivera, CA.



Borehole	North	East	Elev.	Depth
BH12	33	16	0.0	25.0
BH13	28	17	0.0	25.0
BH14	24	17	0.0	25.0
BH4	40	18	0.0	41.0
BH8	18	24	0.0	49.5
BH9	32	15	0.0	48.5

Horizontal Scale 1" = 3'
Vertical Scale 1" = 10'
Dieldrin Concentration in mg/kg
1/20/05 Depth to Groundwater (MW2D) 69.87'

DISTANCES:
Beginning -5
Ending 34
VIEWING ANGLES (degrees):
Horizontal 0.0
Vertical 0.0

Position	North	East
Left, Front	40	12
Right, Front	18	30
Left, Back	40	12
Right, Back	18	30

BOREHOLE LOCATION SKETCH MAP

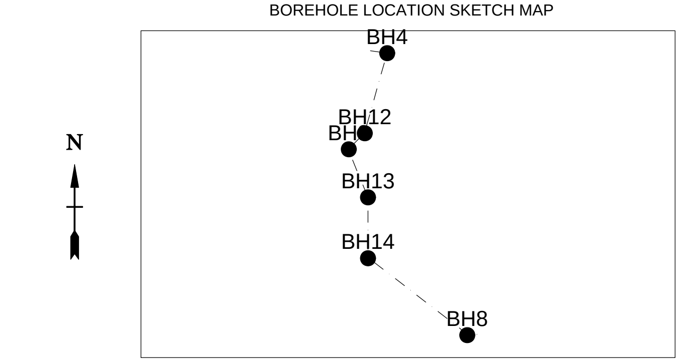


Figure 9. Lithologic Cross Section A-A' Showing Dieldrin Concentration with Depth, Los Angeles Co. Ag. Comm., Pico Rivera, CA

X_SCETION_TABLOID_LAB_193171.GPJ_STD_LOG.GDT 10/24/06

TABLES

Table 2. Wastes Handled
Los Angeles County Department of Agricultural Commisioner
8841 E. Slauson Ave., Pico Rivera

Chemical Name	Physical State**	EPA Haz Waste No.	Waste Characteristic
Acrolein (Magnacide)*	L	P003	T
Acti-done (Cycloheximide)*	S	--	--
Akton	--	--	--
Aldicarb	S	P070	T
Aldrin	S	P004	T
Allethrin	L	--	--
Aluminum Siloco-fluoride	S	--	--
4-Aminopyridine	S	P008	T
Amitrole	S	U011	T
Ammate (Ammonium Sulfamate)	S	--	--
Ammonium Methanearsonate	--	--	--
ANTU	S	--	--
Aramite	L	--	--
Arsenic Trioxide	S	--	--
Atrazine	S	--	--
Avitrol	S	--	--
Azak (Terbucarb)*	--	--	--
Azodrin (Monocrotophos)*	S	--	--
Balan (Benefin)*	S	--	--
Banrot (Etridiazole; Thiophanate-methyl)*	L	--	--
Banvel (Dicamba)	S	--	--
Barium Fluosilicate	S	--	--
Baygon (Propoxur)*	S	--	--
Bayleton (Triadimefon)*	S	--	--
Bendiocarb	S	U278	T
Benomyl	S	U271	T
Benzene Hexachloride (BHC)*	S	--	--
Betasan (Bensulide)	L	--	--
Bidrin (Dicrotophos)	S	--	--
Bladex (Cyanazine)	S	--	--
Boric Acid	S	--	--
Bravo (Chlorothalonil)	S	--	--
Brodifacoum	S	--	--
Bromacil	S,L	--	--
Bromoxynil	S	--	--
Cacodylic Acid	L	U136	T
Cadmium Chloride	S	--	--
Cadmium Succinate	S	--	--
Calcium Arsenate	S	--	--
Calcium Cyanide	S	P021	T
Calocure (Mercury Chloride)	S	--	--
Captan	S	--	--
Carbaryl	S,L	U279	T
Carbon Tetrachloride	L	D019,U211	T
Casoron (Dichlobenil)	S	--	--
Chlordane	L	D020	--
Chlorflurenol	--	--	--

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Los Angeles County Department of Agricultural Commisioner
8841 E. Slauson Ave., Pico Rivera

Chemical Name	Physical State**	EPA Haz Waste No.	Waste Characteristic
Acrolein (Magnacide)*	L	P003	T
Acti-done (Cycloheximide)*	S	--	--
Akton	--	--	--
Aldicarb	S	P070	T
Aldrin	S	P004	T
Allethrin	L	--	--
Aluminum Siloco-fluoride	S	--	--
4-Aminopyridine	S	P008	T
Amitrole	S	U011	T
Ammate (Ammonium Sulfamate)	S	--	--
Ammonium Methanearsonate	--	--	--
ANTU	S	--	--
Aramite	L	--	--
Arsenic Trioxide	S	--	--
Atrazine	S	--	--
Avitrol	S	--	--
Azak (Terbucarb)*	--	--	--
Azodrin (Monocrotophos)*	S	--	--
Balan (Benefin)*	S	--	--
Banrot (Etridiazole; Thiophanate-methyl)*	L	--	--
Banvel (Dicamba)	S	--	--
Barium Fluosilicate	S	--	--
Baygon (Propoxur)*	S	--	--
Bayleton (Triadimefon)*	S	--	--
Bendiocarb	S	U278	T
Benomyl	S	U271	T
Benzene Hexachloride (BHC)*	S	--	--
Betasan (Bensulide)	L	--	--
Bidrin (Dicrotophos)	S	--	--
Bladex (Cyanazine)	S	--	--
Boric Acid	S	--	--
Bravo (Chlorothalonil)	S	--	--
Brodifacoum	S	--	--
Bromacil	S,L	--	--
Bromoxynil	S	--	--
Cacodylic Acid	L	U136	T
Cadmium Chloride	S	--	--
Cadmium Succinate	S	--	--
Calcium Arsenate	S	--	--
Calcium Cyanide	S	P021	T
Calocure (Mercury Chloride)	S	--	--
Captan	S	--	--
Carbaryl	S,L	U279	T
Carbon Tetrachloride	L	D019,U211	T
Casoron (Dichlobenil)	S	--	--
Chlordane	L	D020	--
Chlorflurenol	--	--	--

Table 2. Wastes Handled
Los Angeles County Department of Agricultural Commisioner
8841 E. Slauson Ave., Pico Rivera

Chlorobenzilate	S,L	U038	T
Chloroform	L	D022,U044	T
Chloropicrin	L	--	--
Chlorpyrofos (Dursban)	S,L	--	--
Copper Arsenate	S	--	--
Copper Napthanate	L	--	--
Copper Oleate	S	--	--
Copper Oxychloride Sulfate	S	--	--
Copper Sulfate	S,L	--	--
Coumaphos	--	--	--
Creosote	L	U051	T
Cyano (Methylmercury) Guanidine	--	--	--
Cyprex (Dodine)	S	--	--
2,4-D	S,L	D016	--
Daconil (Chlorothalonil)	S	--	--
Dalapon	S	--	--
DBCP (Dibromochloropropane)	L	U066	T
D-D (1,3-Dichloropropene)	S	U084	T
DDT	S	U061	T
DDVP (Dichlorvos)*	L	--	--
Deltamethrin	S,L,V	--	--
Devrinol (Napropamide)	S	--	--
Diazinon	S,L	--	--
Dibrom (Naled)	S,L	--	--
Dichloroethane (Ethylene Dichloride)*	L	--	--
Dichloroethyl Ether	L	--	--
Dieldrin	S	P037	T
Diethanolamine	L	--	--
Dimethoate	S,V	P044	T
Dimethyl Arsenic Acid (Cacodylic Acid)	S,L	--	--
Dinitrophenol	S	--	--
Dinoseb	L	P020	T
Dioxathion	L	--	--
Diphacinone	S	--	--
Diphenamid	S	--	--
Diquat	S	--	--
Disulfoton (Disyston)	S,L	P039	T
Dithane (Mancozeb)*	S,L	--	--
Dodine	S	--	--
Dowpon	S	--	--
DSMA	S,L	--	--
Dyrene	S	--	--
Endosulfan	S	P050	T
Endrin	S	D012,P051	T
Eptam (EPTC)*	S,L	--	--
Erbon	--	--	--
Ethion	S	--	--
Ethylene Dichloride	L	U077	T
Fenitrothion	S,L	--	--
Ferbam	S	U396	T
Formaldehyde	L	U122	T
Fumarin	S	--	--
Furadan (Carbofuran)	S,L	--	--

Table 2. Wastes Handled
Los Angeles County Department of Agricultural Commisioner
8841 E. Slauson Ave., Pico Rivera

Gardona (Tetrachlorvinphos)	S,L	--	--
Genite	--	--	--
Glyphosate	L	--	--
Gophacide	--	--	--
Guthion (Azinphos-Methyl)	S,L	--	--
Halts (Bandane)	--	--	--
Heptachlor	L	D031,P059	T
Hoelon (Diclofop-methyl)*	L	--	--
Karmex (Diuron)	S	--	--
Kelthane (Dicofol)	S,L	--	--
Kepone	--	U142	T
Kerb (Pronamide)*	S	--	--
Korlan (Ronnel)	S,L	--	--
Kromad	--	--	--
Lasso II (Alachlor)	S,L	--	--
Lauryl Thiocyanate (Loro)	--	--	--
Lead Arsenate	--	--	--
Lesan	--	--	--
Lethane	--	--	--
Lindane	S,L,V	D013,U129	T
Linruon	S	--	--
Malathion	S,L	--	--
Maleic Hydrazide	S,L	--	--
Maloran	S,L	U148	T
MCPA (Chloromethylphenoxy Acetic Acid)	S	--	--
MEMC (Methoxyethylmercury Chloride)	S,L	--	--
Memmi	--	--	--
Mercury	L	D009,U151	T
Metaldehyde	S,L	--	--
Metasystox	L	--	--
Methanearsonic Acid	S	--	--
Methomyl	S,L	P066	T
Methoxychlor	S	U247	T
Methyl Bromide	V	U029	T
Methyl Parathion	S,L	P071	T
Methylcarbamate	S	--	--
Mevinphos	L	--	--
Monoammonium Methanearsonate (MAMA)	S	--	--
Monuron	S	--	--
Morestan	S	--	--
MSMA	S,L	--	--
MTMC (Methylcarbamate)	S	--	--
Nicotine Sulfate	S	--	--
Nitrofen	S	--	--
Omite (Propargite)	S,L	--	--
Oxamyl	S,L	P194	T

Table 2. Wastes Handled
Los Angeles County Department of Agricultural Commisioner
8841 E. Slauson Ave., Pico Rivera

Paraquat	S	--	--
Parathion	S	P089	T
Paris Green (Copper Acetoarsenite)	S	--	--
Parnon	--	--	--
PCNB (Pentachlornitrobenzene)	S,L	U185	T
Pentachlorophenol (PCP)	S	D0137	--
Permethrin	S,L	--	--
Phaltan (Folpet)	--	--	--
Phosphamidon	L	--	--
Phostex	--	--	--
Pipron	L	--	--
Pival (Pivalyn)	S	--	--
Plictran	S	--	--
PMA (Phenylmercury Acetate)	S	P092	T
Pramitol	S	--	--
Prolin	S	--	--
Propanil	S,L	--	--
Pyrethrum (Pyrethrins)	L	--	--
Raticate	S	--	--
Ricetrine	S,L	--	--
Rotenone	S	--	--
Rozol (Chlorophacinone)*	S,L	--	--
Semesan	S,L	--	--
Simazine	S,L	P047	T
Silvex (2,4,5-TP)	S	D017	--
Sinox (DNOC)	S	--	--
Sodium Arsenate	S	--	--
Sodium Cacodylate	S,L	--	--
Sodium Cyanide	S	P106	T
Sodium Floroacetate (1080)	S	--	--
Sodium Fluosilicate (Safsan)*	S	--	--
Sodium Polysulphide	S	--	--
Sodium Thiocyanate	S	--	--
Strychnine	S	P108	T
Sulfotep (Bladafum)	L	--	--
Surflan	S,L	--	--
Swep	--	--	--
Systox	--	--	--
2,4,5-T	S	--	--
TDE (DDD)	S	--	--
Tedion (Tetradifon)	S,V	--	--
Telvar	S	--	--
TEPP (Tetraethylpyrophosphate)	--	P111	T
Thallium Sulphate	S	--	--
Thimet (Phorate)	S	P094	T
Thiram	S	U244	T
Toxaphene	S	D015,P123	T

Table 2. Wastes Handled
Los Angeles County Department of Agricultural Commisioner
8841 E. Slauson Ave., Pico Rivera

Triazine (Dyrene)*	S	--	--
Tributyl Tin Oxide	S	--	--
Trichloroethane	V	--	--
Trichlorofon	S	--	--
Triforine	S	--	--
Trifuralin	--	--	--
Trimec	S,L	--	--
Trithion	L	--	--
Truban (Etridazole)	S,L	--	--
Vacor	--	--	--
Vapam (Metam-Sodium)	S,L	--	--
Warfarin	S,L	U248 <0.3%, P001 >0.3%	T
Zectran	S	--	--
Zinc Phosphide	S	U249 <10%, P122 >10%	T / R,T
Zineb	S	--	--
Ziram	S,L	P205	T

Notes:
Federal Characteristics:
I = Ignitable Waste
C = Corrosive Waste
R = Reactive Waste
T = Toxic Waste
AH = Acutely Hazardous

Physical States:
L = Liquid
S = Solid
-- = Unknown
* = Trade name (Farm Chemicals Handbook, 2002).
** = Some Chemicals listed as solid may have been received at the site in the form of water (or other) solution.

Other:
California Hazardous Waste codes do not exist for these chemicals.

Table 3.
Groundwater Monitoring Well Information
LACDAC Pico Rivera Facility
8841 E. Slauson Ave., Pico Rivera, CA

Well Number	Date Installed	Depth of Well (feet bgs)	Screened Interval (feet bgs)	Casing Material	Casing Diameter (inches)	Screen Slot Size (inches)	Filter Pack Size/Material
MW1	1/28-29/97	55	35 to 55	Schedule 40 PVC	4	0.010	#2-/16 Sand
MW2	1/28-29/97	55	35 to 55	Schedule 40 PVC	4	0.010	#2-/16 Sand
MW3	1/29/1997	55	35 to 55	Schedule 40 PVC	4	0.010	#2-/16 Sand
MW1D	6/23/2003	75	44 to 74	Schedule 40 PVC	2	0.010	#2-/16 Sand
MW2D	6/24/2003	75	44 to 74	Schedule 40 PVC	2	0.010	#2-/16 Sand
MW3D	6/25/2003	75	44 to 74	Schedule 40 PVC	2	0.010	#2-/16 Sand

bgs = below ground surface
brp = below reference point
MSL = Mean Sea Level

TABLE 4-1

Los Angeles County Agricultural Commissioner Facility
Pico Rivera, California
Soil Analytical Results
(mg/kg)

SAMPLE	PESTICIDES/HERBICIDES							OTHER ORGANIC COMPOUNDS			Total Rec.
NUMBER	4,4-DDD	4,4-DDE	4,4-DDT	Dalapon	Silvex	2,4-D	Strychnine	DEHP	BAP	Toluene	Petr.Hydroc.
SS1-4-1	<0.005	<0.005	<0.005	0.32	<0.02	<0.2	<5				
SS2-4-1	<0.005	<0.005	<0.005	0.33	<0.02	<0.2	<5				
SS3-4-1	<0.005	<0.005	<0.005	0.2	<0.02	<0.2	<5				
SS4-4-1	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2	<5				
SS4-4-3	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2	<5				
SS5-4-1	<0.005	<0.005	<0.025	0.59	<0.02	<0.2	<5	<1.5	<0.06		190
SS6-4-1	<0.005	<0.005	<0.025	0.1	<0.02	<0.2		<1.5	<0.04	0.015	<50
SS7-4-1	<0.005	0.081	<0.05	0.12	0.21	<0.2	<5				
SS8-4-1	0.82	0.27	1.5	0.25	<0.02	<0.2	<5	<1.5	<0.05		50
SS9-4-1	<0.005	<0.005	0.0073	0.35	<0.02	<0.2		<1.5	<0.05		6300
SS10-4-1	<0.005	<0.005	<0.005	0.23	<0.02	<0.2		<1.5	<0.05		<50
SS11-4-1	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2					
SS12-4-1	<0.005	<0.005	0.0064	0.26	<0.02	<0.2					50
SS13-4-1	<0.005	<0.005	<0.005	0.3	<0.02	<0.2	<5				65
SS14-4-1	<0.005	<0.005	<0.005	0.13	<0.02	<0.2	<5				
SS14-4-3	<0.005	<0.005	<0.005	0.13	<0.02	<0.2	<5				
SS15-4-1	<0.005	<0.005	<0.005	0.19	<0.02	<0.2	<5				
SS16-4-1	<0.005	<0.005	0.0074	0.21	<0.02	<0.2					
SS17-4-1	<0.005	<0.005	<0.005	0.14	<0.02	<0.2					
SS18-4-1	<0.025	<0.025	0.037	0.21	<0.02	<0.2					
SS19-4-1	<0.005	<0.005	<0.005	0.23	<0.02	0.55	<5				
SS20-4-1	<0.005	<0.005	0.007	0.12	<0.02	<0.2	<5				
SS21-4-1	<0.005	<0.005	0.053	<0.1	0.05	<0.2	<5				
SS22-4-1	<0.005	<0.005	<0.005	0.21	<0.02	<0.2					
SS23-4-1	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2	<5				<50
SS24-4-1	0.0062	<0.005	0.021	0.17	<0.02	<0.2					
SS25-4-1	<0.005	<0.005	<0.005	0.13	<0.02	<0.2	<5				
SS25-4-3	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2	<5				
BH1-4-1	<0.005	<0.005	0.027	<0.1	<0.02	<0.2	<5				<50
BH1-4-5	<0.005	<0.005	<0.005	0.36	<0.02	<0.2	<5			<0.0025	<50
BH1-4-10	<0.005	<0.005	<0.005	0.25	<0.02	<0.2	<5				
BH1-4-15	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2					
BH1-4-20	<0.005	<0.005	<0.005	0.57	<0.02	<0.2					
BH2-4-1	<0.025	<0.005	0.032	0.31	<0.02	<0.2		1.5	0.05		<50
BH2-4-5	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2		<1.5	<0.04	<0.0025	<50
BH2-4-10	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2		4.2	<0.05		<20
BH2-4-15	<0.005	<0.005	<0.005								<50
BH2-4-20	<0.005	<0.005	<0.005								<50
BH3-4-1	<0.005	<0.005	<0.005	0.19	<0.02	<0.2			<0.06		<50
BH3-4-5	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2		3.2	<0.05	<0.0025	<50
BH3-4-10	<0.005	<0.005	<0.005	0.34	<0.02	<0.2			<0.06		<50
BH3-4-15	<0.005	<0.005	<0.005								<20
BH3-4-20	<0.005	<0.005	<0.005								<20
BH4-4-10	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2					
BH4-4-15	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2					
BH4-4-20	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2					
BH4-4-30	<0.005	<0.005	<0.005								
BH4-4-40	<0.005	<0.005	<0.005								
BH5-4-10	<0.005	<0.005	<0.025	0.36	<0.02	<0.2					
BH5-4-15	<0.025	<0.005	<0.025	0.14	<0.02	<0.2					
BH5-4-20	<0.025	<0.005	<0.025	<0.1	<0.02	<0.2					
BH5-4-22	<0.025	<0.005	<0.025	1.1	<0.02	<0.2					
BH5-4-30	<0.005	<0.005	<0.005								
BH5-4-40	<0.005	<0.005	<0.005								
BH6-4-10	<0.005	<0.005	0.008	0.37	<0.02	<0.2					
BH6-4-15	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2					
BH6-4-20	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2					
BH6-4-30	<0.005	<0.005	<0.005								
BH6-4-40	<0.005	<0.005	<0.005								
T1-4-5C											
T1-4-10C											
T2-4-3N											
T3-4-4W							<5				
T3-4-8W							<5				
T4-4-8S							<5				
T5-4-5E							58.4				
ST-4-3	<0.005	<0.005	<0.005	0.3	<0.02	<0.2					
ST-4-6	<0.005	<0.005	<0.005	0.17	<0.02	<0.2					

DEHP = diethylphthalate
BAP = Benzo(a) pyrene

4,4-DDD = Dichlorodiphenyldichloroethane
4,4-DDE = Dichlorodiphenyldichloroetheylene
4,4-DDT = Dichlorodiphenyltrichloroethane

2,4-D = Dichlorophenoxyacetic Acid
= Samples in area of 4000 g UST
= Samples in area of Sea Bin

TABLE 4-2
Los Angeles County Agricultural Commissoner Facility
Pico Rivera, California
Soil Analytical Results
(mg/km)

SAMPLE	METAL SPECIES							OTHERS
NUMBER	As	Cd	Cu	Pb	Hg	Tl	Zn	CN
SS1-4-1								
SS2-4-1								
SS3-4-1	<5	<0.25	19.6	7.7	<0.06	<5	44.8	
SS4-4-1	<5	<0.25	19	36.3	<0.06	<5	134	<0.1
SS4-4-3	<5	<0.25	13.7	16.3	0.08	<5	41.8	<0.1
SS5-4-1								
SS6-4-1	<5	<0.25	19	18.1	<0.06	<5	66.5	
SS7-4-1								
SS8-4-1								
SS9-4-1	<5	1.6	19.9	213	<0.06	<5	100	
SS10-4-1	<5	<0.25	17.3	37.4	<0.06	<5	62.4	
SS11-4-1								
SS12-4-1								
SS13-4-1	12.1	<0.25	29.7	7.8	<0.06	<5	51.9	
SS14-4-1	<5	<0.25	13	65.9	<0.06	<5	36.5	
SS14-4-3	<5	<0.25	9.7	<2.5	0.07	<5	23.6	
SS15-4-1								
SS16-4-1	<5	<0.25	22.8	50.5	<0.06	<5	66.6	<0.1
SS17-4-1	<5	<0.25	17	18.5	<0.06	<5	45.4	<0.1
SS18-4-1	<5	0.54	27.7	61.8	0.07	<5	74.8	<0.1
SS19-4-1								
SS20-4-1								
SS21-4-1								
SS22-4-1								
SS23-4-1								
SS24-4-1	<5	<0.25	14.3	48.6	<0.06	<5	52.6	
SS25-4-1	<5	<0.25	17.2	48.4	<0.06	<5	66.3	
SS25-4-3	<5	<0.25	13.7	4.2	<0.06	<5	34	
BH1-4-1	<5	<0.25	13.5	<2.5	0.22	<5	24.6	
BH1-4-5	<5	<0.25	11.1	<2.5	<0.06	<5	18.9	
BH1-4-10	<5	<0.25	9.8	<2.5	<0.06	<5	19.7	
BH1-4-15								
BH1-4-20								
BH2-4-1	<5	<0.25	10.5	<2.5	<0.06	<5	19.4	
BH2-4-5	<5	<0.25	12.9	<2.5	<0.06	<5	23.5	
BH2-4-10	<5	<0.25	11.9	<2.5	<0.06	<5	23.8	
BH2-4-15								
BH2-4-20								
BH3-4-1	<5	<0.25	12.3	<2.5	<0.06	<5	26	
BH3-4-5	<5	<0.25	10.6	<2.5	<0.06	<5	19.4	
BH3-4-10	<5	<0.25	12.4	<2.5	<0.06	<5	19.4	
BH3-4-15								
BH3-4-20								
BH4-4-10	5.9	<0.25	10.1	<2.5	<0.06	<5	24.7	<0.1
BH4-4-15								
BH4-4-20								
BH4-4-30								
BH4-4-40								
BH5-4-10	5.3	<0.25	8.6	<2.5	<0.06	<5	23.7	<0.10
BH5-4-15								
BH5-4-20								
BH5-4-22								
BH5-4-30								
BH5-4-40								
BH6-4-10	<5	<0.25	8.3	<2.5	<0.06	<5	18.7	<0.1
BH6-4-15								
BH6-4-20								
BH6-4-30								
BH6-4-40								
T1-4-5C	<5	<2.5	18.3	14.2	<1	<5	37.8	
T1-4-10C	<5	<2.5	11.3	15.1	<1	<5	26	
T2-4-3N	6.1	<2.5	19.2	15.9	<1	<5	37.4	
T3-4-4W	<5	<2.5	15.1	17.1	<1	<5	42	
T3-4-8W	<5	<2.5	10	10	<1	<5	16.6	
T4-4-8S	13.2	<2.5	8.5	10.2	<1	<5	18.4	
T5-4-5E	<5	<2.5	9	12.2	<1	<5	11.7	
ST-4-3								
ST-4-6								

As = Arsenic
Cd = Cadmium
Cu = Copper
Pb = Lead
Hg = Mercury
Tl = Thallium
Zn = Zinc
CN = Cyanide

TABLE 4-3
Los Angeles County Agricultural Commissioner Facility
Pico Rivera, California
Soil Analytical Results, Polychlorinated Dioxins/Furans (pg/g)

SAMPLE NUMBER	FURANS				DIOXINS			
	2,3,7,8-TCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	OCDF	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD
SS1-4-1	<0.42	<1.6	<0.47	<2.2	<0.21	<0.35	<3.7	47
SS2-4-1	<0.60	<0.27	<0.15	<0.32	<0.28	<0.31	<0.31	<2.8
SS3-4-1	<0.24	<1.6	<0.42	<2.4	<0.23	<0.36	<2.4	25
SS16-4-1	1.2	20	<1.6	53	<3.6	<3.0	79	1000
SS17-4-1	<0.70	45	5.5	94	5.3	<4.3	140	1300
SS18-4-1	1.5	20	<2.8	52	6.4	5.4	120	1100
BH4-4-10	<0.11	<0.11	<0.10	<0.24	<0.16	<0.18	<0.23	<2.4
BH5-4-10	<0.23	<0.14	<0.19	<0.36	<0.24	<0.27	<0.43	<8.7
BH6-4-10	<0.1	<0.1	<0.14	<0.28	<0.17	<0.31	<0.25	<4.4
TEF	0.1	0.01	0.01	0.001	0.1	0.1	0.01	0.001

TEF = 2,3,7,8 TCDD Toxicity Equivalency Factor (1989 USEPA Interim)
TE = Toxicity Equivalent (as above)

2,3,7,8-TCDF = 2,3,7,8-tetrachlorodibenzofuran
1,2,3,4,6,7,8-HpCDF = 1,2,3,4,6,7,8-heptachlorodibenzofuran
1,2,3,4,7,8,9-HpCDF = 1,2,3,4,7,8,9-heptachlorodibenzofuran
OCDF = octochlorodibenzofuran

1,2,3,6,7,8-HxCDD = 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin
1,2,3,7,8,9-HxCDD = 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin
1,2,3,4,6,7,8-HpCDD = 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin
OCDD = octochlorodibenzo-p-dioxin

POLYCHLORINATED DIOXINS/FURANS, TOXICITY EQUIVALENCY FACTORS (TEF)

SAMPLE NUMBER	FURANS				DIOXINS				TOTAL TE (pg/g)
	2,3,7,8-TCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	OCDF	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	
SS1-4-1								0.047	0.047
SS3-4-1								0.025	0.025
SS16-4-1	0.12	0.2		0.053			0.79	1	2.163
SS17-4-1		0.45	0.055	0.094	0.53		1.4	1.3	3.829
SS18-4-1	0.15	0.2		0.052	0.64	0.54	1.2	1.1	3.882

TABLE 4-4
Los Angeles County Agricultural Commissioner Facility
Pico Rivera, California
Duplicate Soil Analytical Results (mg/kg)

SAMPLE	PESTICIDES/HERBICIDES						OTHER ORGANICS		Total Rec.	METALS	
NUMBER	4,4-DDD	4,4-DDE	4,4-DDT	Dalapon	Silvex	2,4-D	BAP	Toluene	Petr.Hydroc.	Cd	Hg
SS1-4-1 D	<0.005	<0.005	<0.005	0.29	<0.02	<0.2					
SS3-4-1 D	<0.005	<0.005	<0.005	0.25	<0.02	<0.2				<0.25	<0.06
SS5-4-1 D	<0.005	<0.005	<0.025	14	<0.02	<0.2	<0.06				
BH1-4-5B	<0.005	<0.005	<0.005	0.13	<0.02	<0.2		<0.0025		<0.25	<0.06
BH2-4-1B	<0.025	<0.005	0.0059	0.15	<0.02	<0.2	<0.06			<0.25	0.14
BH2-4-10B	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2	<0.06		<20	<0.25	<0.06
BH4-4-10B	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2				<0.25	<0.06
BH6-4-10B	<0.005	<0.005	<0.005	<0.1	<0.02	<0.2				<0.25	<0.06

DEHP = diethylphthalate
BAP = Benzo(a) pyrene

4,4-DDD = Dichlorodiphenyldichloroethane
4,4-DDE = Dichlorodiphenyldichloroetheylene
4,4-DDT = Dichlorodiphenyltrichloroethane

2,4-D = Dichlorophenoxyacetic Acid
Cd = Cadmium
Hg = Mercury

Table 4-5
Los Angeles County Agricultural Commissioner Facility, Pico Rivera, CA
Monitoring Wells and Additional Borings
Summary of Analytical Results - Soil, Additional Samples (1997 through 2001)

Sample Number and Depth	Date Collected	Pesticides/Herbicides EPA 8080 All Constituents µg/kg	Pesticides/Herbicides EPA 8140 All Constituents µg/kg	Pesticides/Herbicides EPA 8150 All Constituents µg/kg	Volatile Organics EPA 8260 All Constituents µg/kg	Petroleum Hydrocarbons EPA 418.1 mg/kg	Petroleum Hydrocarbons EPA 8015 All Fractions mg/kg	Metals As mg/kg	Metals Cd mg/kg	Metals Cu mg/kg	Metals Pb mg/kg	Metals Hg mg/kg	Metals Tl mg/kg	Metals Zn mg/kg	Strychnine mg/l
MW1S-5-10	1/28/1997	ND	ND	ND	NA	NA	NA	<10.0	<0.50	10.9	<10.0	<0.040	<50.0	21.4	NA
MW1S-5-15	1/28/1997	ND	ND	ND	NA	NA	NA	<10.0	<0.50	16.3	<10.0	<0.040	<50.0	27.2	NA
MW1S-5-20	1/28/1997	ND	ND	ND	NA	NA	NA	<10.0	<0.50	6.2	<10.0	<0.040	<50.0	15.5	NA
MW1S-5-20(D)	1/28/1997	ND	ND	ND	NA	NA	NA	<10.0	<0.50	7.6	<10.0	<0.040	<50.0	16.1	NA
MW1S-5-30	1/28/1997	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1S-5-40	1/28/1997	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW2S-5-15	1/28/1997	ND	ND	ND	NA	NA	NA	<10.0	<0.50	13.9	<10.0	<0.040	<50.0	25.6	NA
MW2S-5-20	1/28/1997	ND	ND	ND	NA	NA	NA	<10.0	<0.50	18.7	<10.0	0.040	<50.0	25.0	NA
MW2S-5-20(D)	1/28/1997	ND	ND	ND	NA	NA	NA	<10.0	<0.50	7.6	<10.0	<0.040	<50.0	15.2	NA
MW2S-5-30	1/28/1997	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW2S-5-40	1/28/1997	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW3S-5-15	1/29/1997	ND	NA	NA	NA	NA	NA	20.1	<0.50	6.4	<10.0	NA	<50.0	30.1	<0.1
MW3S-5-20	1/29/1997	ND	NA	NA	NA	NA	NA	10.9	<0.50	11.4	<10.0	NA	<50.0	33.9	<0.1
SS4-5-3	1/30/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50.7	NA
SS4-5-3(D)	1/30/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	45.5	NA
SS4-5-5	1/30/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.3	NA
SS5-5-3	1/30/1997	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS5-5-5	1/30/1997	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS8-5-3	1/30/1997	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS8-5-5	1/30/1997	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS9-5-3	1/30/1997	NA	NA	NA	ND	<10	ND	NA	<0.50	NA	<10.0	NA	NA	NA	NA
SS9-5-5	1/30/1997	NA	NA	NA	ND	<10	ND	NA	<0.50	NA	<10.0	NA	NA	NA	NA
SS14-5-3	1/30/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10.0	NA	NA	NA	NA
SS14-5-5	1/30/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10.0	NA	NA	NA	NA
SS18-5-3	1/30/1997	NA	NA	NA	NA	NA	NA	NA	<0.50	NA	<10.0	NA	NA	NA	NA
SS18-5-5	1/30/1997	NA	NA	NA	NA	NA	NA	NA	<0.50	NA	<10.0	NA	NA	NA	NA

DEHP = diethylphthalate
BAP = Benzo(a) pyrene
2,4-D = Dichlorophenoxyacetic Acid

4,4-DDD = Dichlorodiphenyldichloroethane
4,4-DDE = Dichlorodiphenyldichloroetheylene
4,4-DDT = Dichlorodiphenyltrichloroethane

As = Arsenic
Cd = Cadmium
Cu = Copper
Pb = Lead

Hg = Mercury
Tl = Thallium
Zn = Zinc
CN = Cyanide

Table 4-6
Los Angeles County Agricultural Commissioner Facility, Pico Rivera, CA
Monitoring Wells and Additional Borings
Summary of Analytical Results - Soil, Additional Samples (1997 through 2001)

Sample Location	Depth	Pesticides/Herbicides																
		EPA 8081[A]											EPA 8141[B]			EPA 8151A[C]		
		gama-Chlordane	alpha-Chlordane	Dieldrin	4,4'-DDT	4,4'-DDE	Heptachlor	gamma-BHC (Lindane)	delta-BHC	beta-BHC	Total Endrin	Heptachlor epoxide	Fensulfothion	Ronnel	Chlorpyrifos	2,4-D	2,4,5-TP (Silvex)	2,4,5-T
	(feet bgs)	mg/kg											mg/kg			mg/kg		
BH8-6	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15	0.20	0.19	0.39	2.9	<0.17	<0.065	<0.065	<0.065	<0.065	<0.17	<0.065	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	20	0.004	0.002	0.016	0.0078	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	25	0.0017	0.002	0.0052	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	30	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	35	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	40	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	45	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	47	<0.0017	<0.0017	<0.0034	0.012	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	48	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
BH9-6	5	0.013	0.018	<0.0034	0.015	0.0046	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	10	0.0063	0.0072	0.0092	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	15	<8.5	<8.5	<17	97	<17	<8.5	<8.5	<8.5	<8.5	<17	<8.5	0.071	0.097	0.13	1.6	1.1	1.8
	20	0.053	0.05	0.056	0.20	<0.034	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	25	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	0.0023	<0.0017	<0.0017	<0.0034	0.0072	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	30	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	35	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	40	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	45	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
	47	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
BH10-6	5	0.024	0.024	0.0046	0.029	0.015	0.002	<0.0017	<0.0017	<0.0017	<0.0034	0.0024	<1.6	<1.6	<1.6	<0.080	<0.020	<0.020
BH11-6	5	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	<0.033	<0.033	<0.033	<0.080	<0.020	<0.020
BH12-7	5	0.2	0.18	0.084	0.62	0.12	<0.034	<0.034	<0.034	<0.034	<0.068	<0.034	NA	NA	NA	NA	NA	NA
	10	0.02	0.016	0.045	<0.0034	<0.0034	0.0053	<0.0017	0.0056	0.0064	0.0034	0.0039	NA	NA	NA	NA	NA	NA
	15	0.023	0.016	0.042	0.011	<0.0068	<0.0034	<0.0034	<0.0034	<0.0034	<0.0068	<0.0034	NA	NA	NA	NA	NA	NA
	20	0.012	0.015	0.017	0.0320	0.0071	<0.0017	<0.0017	0.0019	<0.0017	<0.0034	0.0017	NA	NA	NA	NA	NA	NA
	25	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	NA	NA	NA	NA	NA	NA
BH13-7	5	0.11	0.098	<0.034	<0.034	<0.034	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	NA	NA	NA	NA	NA	NA
	10	0.0046	0.0038	0.0054	0.0049	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	NA	NA	NA	NA	NA	NA
	15	15.0	14.0	<17	110	<17	<8.5	30.0	<8.5	<8.5	<17	<8.5	NA	NA	NA	NA	NA	NA
	20	0.075	0.064	0.079	0.21	<0.034	<0.017	30.0	<0.017	<0.017	<0.034	<0.017	NA	NA	NA	NA	NA	NA
	25	0.045	0.044	0.059	0.55	<0.034	0.017	0.038	<0.017	<0.017	<0.034	<0.017	NA	NA	NA	NA	NA	NA
BH14-7	5	0.75	0.68	1.0	0.77	<0.34	0.19	<0.17	<0.17	<0.17	<0.34	<0.17	NA	NA	NA	NA	NA	NA
	10	0.11	0.092	<0.017	0.041	<0.034	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	NA	NA	NA	NA	NA	NA
	15	0.05	0.04	0.12	<0.017	<0.017	<0.0065	<0.0065	<0.0065	<0.0065	<0.017	<0.0065	NA	NA	NA	NA	NA	NA
	20	0.047	0.043	0.058	<0.034	<0.034	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	NA	NA	NA	NA	NA	NA
	25	<0.0017	<0.0017	<0.0034	<0.0034	<0.0034	<0.0017	<0.0017	<0.0017	<0.0017	<0.0034	<0.0017	NA	NA	NA	NA	NA	NA
Res PRG		1.6	2	0.028	1.7	1.7	0.099	0.42	0.44	0.32	18	0.049		2700	160	640	440	560

NA = Not Analyzed
mg/kg = milligrams per kilogram
A = Other EPA 8081 compounds not detected.
B= Other EPA Method 8141 compounds not detected
C = Other EPA Method 8151A compounds not detected

2,4-D = Dichlorophenoxyacetic Acid
4,4-DDD = Dichlorodiphenyldichloroethane
4,4-DDE = Dichlorodiphenyldichloroethylene
4,4-DDT = Dichlorodiphenyltrichloroethane

DEHP = diethylphthalate
BAP = Benzo(a) pyrene

As = Arsenic
Cd = Cadmium
Cu = Copper
Pb = Lead

Hg = Mercury
Tl = Thallium
Zn = Zinc
CN = Cyanide

TABLE 4-7
Los Angeles County Agricultural Commissioner Facility, Pico Rivera, CA
Monitoring Wells and Additional Borings
Summary of Analytical Results - Soil, Additional Samples (1999 through 2001)

Sample Location	Depth	Metals					
		As	Cd	Cu	Pb	Tl	Zn
	(feet bgs)	mg/kg					
BH8-6	5	NA	NA	NA	NA	NA	NA
	10	NA	NA	NA	NA	NA	NA
	15	4.1	<0.5	9.7	7.9	4.0	45.0
	20	1.2	<0.5	4.9	1.5	<1.0	16.0
	25	6.7	<0.5	15.9	3.5	<1.0	36.8
	30	6.0	<0.5	14.2	2.6	<1.0	35.9
	35	9.0	<0.5	24.2	5.1	<1.0	50.6
	40	3.7	<0.5	19.2	3.7	<1.0	50.3
	45	4.3	<0.5	7.6	2.0	<1.0	21.1
	47	4.4	<0.5	5.7	1.7	<1.0	19.1
	48	4.0	<0.5	4.8	1.4	<1.0	14.2
BH9-6	5	6.6	0.73	35.6	73.8	<1.0	119
	10	2.3	<0.5	9.0	1.9	<1.0	26.2
	15	<1.0	<0.5	7.3	1.6	<1.0	21.2
	20	<1.0	<0.5	4.6	1.2	<1.0	14.4
	25	5.7	<0.5	15.2	3.1	<1.0	35.5
	30	6.6	<0.5	13.7	3.0	<1.0	33.5
	35	9.4	<0.5	12.4	2.7	<1.0	33.8
	40	2.7	<0.5	19.3	3.7	<1.0	51.4
	45	2.0	<0.5	4.6	1.6	<1.0	16.2
	47	1.4	<0.5	4.6	1.5	<1.0	15.1
BH10-6	5	5.9	<0.5	16.7	23.0	<1.0	59.5
BH11-6	5	2.0	<0.5	10.3	2.3	<1.0	26.5
Res. PRG		21*	9.0	2800	130	6.0	22000

Samples from BH-12, -13, -14 not analyzed for metals

As = Arsenic (* non-cancer end point PRG)
Cd = Cadmium
Cu = Copper
Tl = Thalium
Pb = Lead
Zn = Zinc

Table 4.8.
Summary of Soil Analytical Results
2004 Cesspool Area Sampling
Arsenic and Strychnine
LACDAC Pico Rivera Facility
8841 E. Slauson Ave., Pico Rivera, CA

Sample ID	Sample Depth (feet bgs)	Date Collected	Arsenic	Strychnine
			by EPA Method 7060A	Liquid Chromatography - UV Absorption
			mg/kg	µg/kg
BH-21-1	1	7/22/2004	3.65	--
BH-21-2.5	2.5		3.45	--
BH-21-2.5 (Dup)	2.5		4.10	--
BH-21-5	5		2.15	--
BH-21-10	10		3.60	<10
BH-21-15	15		3.00	<10
BH-21-15 (Dup)	15		--	<10
BH-21-20	20		3.00	<10
BH-22-1	1		4.65	--
BH-22-2.5	2.5		3.45	--
BH-22-5	5		3.25	--
BH-22-5 (Dup)	5		5.90	--
BH-22-10	10		3.30	<10
BH-22-15	15		2.75	<10
BH-22-20	20		3.20	<10
BH-23-1	1		6.00	--
BH-23-2.5	2.5		7.30	--
BH-23-5	5		3.30	--
BH-23-10	10		3.75	<10
BH-23-15	15		3.60	<10
BH-23-20	20		3.90	<10
BH-24-1	1		7.45	--
BH-24-2.5	2.5		6.90	--
BH-24-5	5		7.35	--

mg/kg = milligrams per kilogram; equivalent to parts per million
µg/kg = micrograms per kilogram; equivalent to parts per billion

Table 4.9.
Summary of Soil Analytical Results
Background Sampling
Metals
LACDAC Pico Rivera Facility
8841 E. Slauson Ave., Pico Rivera, CA

Sample ID	Sample Depth (feet bgs)	Date Collected	CAM Title 22 Metals																
			Sb	As*	Ba	Be	Cd*	Cr	Co	Cu	Pb*	Hg*	Mo	Ni	Se	Ag	Tl*	V	Zn
			mg/kg																
BH-15-1	1	7/22/2004	<1.0	4.20	87.8	<1.3	<0.1	14.0	8.80	16.9	3.60	<0.1	<2.5	13.3	<1.0	<2.5	<0.5	27.2	59.3
BH-15-2.5	2.5		<1.0	3.24	36.7	<1.3	<0.1	5.70	3.90 J	6.90	1.60	<0.1	<2.5	5.10	<1.0	<2.5	<0.5	12.7	22.9
BH-15-5	5		<1.0	2.75	31.6	<1.3	<0.1	5.40	3.50 J	5.70	1.35	<0.1	<2.5	4.70 J	<1.0	<2.5	<0.5	11.0	20.4
BH-15-10	10		<1.0	3.75	42.2	<1.3	<0.1	8.10	4.70	8.20	2.15	<0.1	<2.5	6.50	<1.0	<2.5	<0.5	15.1	26.5
BH-16-1	1		<1.0	10.1	59.9	<1.3	<0.1	10.3	6.80	12.9	5.45	<0.1	<2.5	8.60	<1.0	<2.5	<0.5	20.0	42.4
BH-16-2.5	2.5		<1.0	3.55	38.7	<1.3	<0.1	4.60 J	3.10 J	5.70	1.45	<0.1	<2.5	4.00 J	<1.0	<2.5	<0.5	10.2	19.7
BH-16-5	5		<1.0	3.65	38.8	<1.3	<0.1	5.10	3.40 J	6.50	1.50	<0.1	<2.5	4.80 J	<1.0	<2.5	<0.5	10.6	22.0
BH-16-10	10		<1.0	3.10	22.4	<1.3	<0.1	3.40 J	<2.5	3.60 J	1.00	<0.1	<2.5	2.90 J	<1.0	<2.5	<0.5	6.90 J	13.7
BH-17-1	1		<1.0	4.95	63.6	<1.3	0.350	11.1	6.20	15.1	43.4	<0.1	<2.5	9.20	<1.0	<2.5	<0.5	19.3	95.4
BH-17-2.5	2.5		<1.0	5.10	72.7	<1.3	0.470	11.0	5.20	21.9	94.5	<0.1	<2.5	9.70	<1.0	<2.5	<0.5	16.8	139
BH-17-5	5		<1.0	6.85	32.9	<1.3	<0.1	5.10	3.50 J	6.30	1.35	<0.1	<2.5	4.50 J	<1.0	<2.5	<0.5	10.6	20.7
BH-17-10	10		<1.0	3.45	24.9	<1.3	<0.1	4.60 J	3.00 J	4.80 J	1.50	<0.1	<2.5	4.30 J	<1.0	<2.5	<0.5	8.50	17.3
BH-18-1	1		<1.0	4.25	77.5	<1.3	<0.1	13.3	8.10	16.1	3.60	<0.1	<2.5	11.1	<1.0	<2.5	<0.5	24.8	47.5
BH-18-2.5	2.5		<1.0	3.20	33.9	<1.3	<0.1	5.40	3.90 J	6.60	1.75	<0.1	<2.5	4.90 J	<1.0	<2.5	<0.5	12.1	23.9
BH-18-5	5		<1.0	2.65	21.1	<1.3	<0.1	2.80 J	<2.5	3.80 J	0.900	<0.1	<2.5	2.70 J	<1.0	<2.5	<0.5	6.2	14.3
BH-18-10	10		<1.0	2.99	36.6	<1.3	<0.1	5.7	3.70 J	6.70	1.45	<0.1	<2.5	4.80 J	<1.0	<2.5	<0.5	11.2	21.7
BH-19-1	1		<1.0	32.0	73.5	<1.3	0.104 J	13.1	8.00	18.0	12.9	<0.1	<2.5	10.6	<1.0	<2.5	<0.5	24.0	65.3
BH-19-2.5	2.5		<1.0	11.5	63.1	<1.3	<0.1	9.50	6.00	11.7	2.35	<0.1	<2.5	7.90	<1.0	<2.5	<0.5	19.2	33.7
BH-19-5	5		<1.0	7.95	42.5	<1.3	<0.1	5.50	4.10 J	6.90	1.65	<0.1	<2.5	5.00	<1.0	<2.5	<0.5	12.6	24.0
BH-19-10	10		<1.0	4.95	35.7	<1.3	<0.1	5.70	3.40 J	5.80	1.50	<0.1	<2.5	5.00	<1.0	<2.5	<0.5	11.0	20.7
BH-20-1	1		<1.0	4.95	62.6	<1.3	0.200	10.6	6.00	13.0	46.5	<0.1	<2.5	8.70	<1.0	<2.5	<0.5	19.9	92.5
BH-20-2.5	2.5		<1.0	4.90	74.0	<1.3	0.250	13.3	7.00	19.1	68.5	<0.1	<2.5	10.6	<1.0	<2.5	<0.5	22.7	125
BH-20-5	5		<1.0	3.25	29.6	<1.3	<0.1	4.80 J	3.20 J	5.50	1.40	<0.1	<2.5	4.70 J	<1.0	<2.5	<0.5	10.0	20.2
BH-20-10	10		<1.0	3.50	27.5	<1.3	<0.1	5.20	3.40 J	5.80	1.40	<0.1	<2.5	5.10	<1.0	<2.5	<0.5	10.7	19.5
Mean			all ND	4.73	47.1	all ND	0.10	7.64	4.64	9.73	9.05	all ND	all ND	6.61	all ND	all ND	all ND	14.72	42.0
Standard Deviation			all ND	2.31	20.0	all ND	0.11	3.55	2.05	5.47	17.98	all ND	all ND	2.91	all ND	all ND	all ND	6.00	36.0
UCL			all ND	5.59	54.9	all ND	0.195**	8.89	5.36	14.60	46.40	all ND	all ND	7.65	all ND	all ND	all ND	17.0	74.0

bgs = below ground surface

Mean and standard deviation are calculated using "J" values and substituting 1/2 detection limit for non-detect values.

J = Analyte detected above method detection limit (MDL) but below practical quantitiation limit (PQL)

UCL = Upper confidence interval based on mean plus confidence interval determined using statistic recommended by PrpUCL

* = Arsenic analyzed using EPA Method 7060A; Cadmium by EPA Method 7131A; Lead by EPA Method 7421; Mercury by EPA Method 7471; Thallium by EPA Method 7841

mg/kg = milligrams per kilogram; equivalent to parts per million

Shaded cell = outlier based on Dixon's test (not used in bkg calcs).

** UCL for Cd based on only 6 detections of which one was below the reporting limit

Table 5
Los Angeles County Agricultural Commissioner Facility, Pico Rivera, CA
Cumulative Groundwater Monitoring Results
Pesticides, Herbicides, Volatile Organics, Metals, and Strychnine

Sample Number	Date Collected	Pesticides/Herbicides				Volatile Organics	Metals							
		EPA 8081 All Constituents µg/l	EPA 8141 All Constituents µg/l	EPA 8151[a] µg/l		EPA 8260 All Constituents µg/l	mg/l							Strychnine mg/l
				Dicamba	Dinoseb		As	Cd	Cu	Pb	Hg	Tl	Zn	
MW-1	2/14/1997	ND	ND	**0.51**	<0.25	**MEK = 13[b]**	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	5/14/1997	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	10/29/1997	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	**0.034**	<0.04
	1/6/98[c]	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	4/29/1999	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	**0.042**	NA
	3/24/2000	ND	ND	NA	NA	NA	**0.012**	<0.0050	<0.025	**0.0056**	NA	<0.010	**0.034**	NA
	3/24/00*	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/2000	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
	8/16/2000	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
	5/21/2001	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
MW-2	2/14/1997	ND	ND	<0.10	**1.9**	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	5/14/1997	ND	ND	<0.10	**12**	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	10/29/1997	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	1/6/98[c]	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	4/29/1999	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
	3/24/2000	ND	ND	<2.0	<0.60	NA	**0.043**	<0.0050	**0.093**	**0.039**	NA	<0.010	**0.18**	NA
	3/24/00*	NA	ND	<2.0	<0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/2000	ND	ND	<2.0	<0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/2000	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
	5/21/2001	ND	ND	<2.0	<0.60	NA	**0.012**	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
MW-3	2/14/1997	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	5/14/1997	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	10/29/1997	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	**0.022**	<0.04
	1/6/98[c]	ND	ND	<0.10	<0.25	ND	<0.030	<0.0050	<0.025	<0.10	<0.00020	<2.0	<0.020	<0.04
	4/29/1999	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
	3/24/2000	ND	ND	<2.0	<0.60	NA	**0.028**	<0.0050	**0.055**	**0.014**	NA	<0.010	**0.12**	NA
	5/26/2000	ND	ND	<2.0	<0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/2000	ND	ND	<2.0	<0.60	NA	<0.010	<0.0050	<0.025	<0.0050	<0.00020	<0.010	<0.020	NA
	5/21/2001	ND	ND	<2.0	<0.60	NA	**0.012**	<0.0050	<0.025	<0.0050	<0.00020	<0.010	**0.025**	NA

ND = Not Detected
MEK = Methyl Ethyl Ketone
NA = Not Analyzed
a = All other EPA 8150 or 8151 constituents ND

* = Duplicate sample analysis.

b = All other EPA 8260 constituents ND
c = EPA 8140 and 8150 exceeded holding times - re-sampled 1/23/98

As = Arsenic
Cd = Cadmium
Cu = Copper
Pb = Lead
Hg = Mercury
Tl = Thallium
Zn = Zinc
CN = Cyanide

TABLE 6-1. SUMMARY COST ESTIMATE RANGES, RECOMMENDED ALTERNATIVE, LACDAC, PICO RIVERA, CA						
CATEGORY	**ITEM**	**LOW COST ($)**	**HIGH COST ($)**	**MEAN ($)**	**Mean-30% ($)**	**Mean+50% ($)**
Soil Excavation (including additional definition)	Mob./Demob. (bucket auger)	0	863	431	302	647
	Drilling (bucket auger)	0	25,875	12,938	9056	19406
	Sampling (bucket auger)	0	1,150	575	403	863
	Loader	1,035	16,560	8,798	6158	13196
	Cement Backfill	0	5,750	2,875	2013	4313
	Mob./Demob. (backhoe)	345	345	345	242	518
	Excavation (backhoe)	6,210	2,760	4,485	3140	6728
	Soil Backfill	1,725	690	1,208	845	1811
	Sampling from excavation	690	1,150	920	644	1380
Oversight and Reporting	SCS Staff Field Oversight	6,300	16,800	11,550	8085	17325
	Management	3,960	6,600	5,280	3696	7920
	Reporting	3,800	5,000	4,400	3080	6600
	Certification	3,000	4,000	3,500	2450	5250
Lab Analy-sis	EPA 8081A	6,038	8,050	7,044	4931	10566
	TCLP (8081)	1,725	2,875	2,300	1610	3450
	Physical Testing	0	1,840	920	644	1380
Containerize and Dispose Soil	Bin Sampling	450	750	600	420	900
	Bin Mob.	3,450	6,900	5,175	3623	7763
	Bins	1,656	4,140	2,898	2029	4347
	Transp/Disposal (non-haz)	16,100	28,750	22,425	15698	33638
	Tansp/Disposal (haz)	2,013	11,500	6,756	4729	10134
TOTALS		58,496	152,348	105,422	73,795	158,133
Contingency (20%)				21,084	14,759	31,627
TOTAL RANGE ABOUT MEAN PLUS CONTINGENCY				**126,506**	**88,554**	**189,759**

TABLE 6-2. UNIT AND COST PARAMETERS - LACDAC SOIL REMOVAL						
CATEGORY	ITEM	NUMBER		UNITS	UNIT COST ($)	
RANGES		LOW	HIGH		LOW	HIGH
Soil Excavation (including additional definition)	Mob./Demob. (bucket auger)	0	1	each	500	750
	Drilling (bucket auger)	0	100	hour	200	225
	Sampling (bucket auger)	0	20	each	50	50
	Loader	1	12	day	900	1200
	Cement Backfill	0	100	cu. yard	40	50
	Mob./Demob. (backhoe)	1	1	each	300	300
	Excavation (backhoe)	6	2	day	900	1200
	Soil Backfill *	150	30	cu. yard	10	20
	Sampling from excavation *	30	20	each	20	50
Oversight and Reporting	SCS Staff Field Oversight	7	14	day	900	1200
	Management	24	40	hour	165	165
	Reporting	40	40	hour	95	125
	Certification	1	1	each	3000	4000
Lab Analy-sis	EPA 8081A	30	40	each	175	175
	TCLP (8081)	6	10	each	250	250
	Physical Testing	0	4	each	375	400
Containerize and Dispose Soil	Bin Sampling	6	10	each	75	75
	Bin Mob.	6	10	each	500	600
	Bins	120	300	day	12	12
	Transp/Disposal (non-haz)	140	200	tons	100	125
	Tansp/Disposal (haz)	5	25	tons	350	400

* For soil backfill and sampling, some "low" cost estimates exceed "high" cost estimates because high estimates include sampling from bucket auger holes and backfilling bucket auger holes with cement slurry.

TABLE 7. CLOSURE SCHEDULE
LOS ANGELES COUNTY AGRICULTURAL COMMISSIONER
8841 E. SLAUSON AVE., PICO RIVERA

Task Description	Start Date (days after approval of permit modification)	Duration (calendar days)
Soil removal *	30	90
Prepare closure report	120	60
Submit closure certification report	180	1

Note: Some of tasks to be conducted simultaneously.

* Soil removal will consist of several subtasks, as follows:

Soil excavation - anticipated to start within 5 days of the start of the soil removal task or 35 days after permit modification approval.

Confirmation soil sampling - expected to start 15 days after the start of the start of the soil removal task or 45 days after permit modification approval.

Backfilling - expected to start no more than 45 days after the start of the start of the soil removal task or 75 days after permit modification

Off site transportation and disposal of soil - also expected to start no more than 45 days after the start of the start of the soil removal task or 75 days after permit modification approval.

APPENDIX A

TOPOGRAPHIC MAP
8841 E. SLAUSON AVE., PICO RIVERA, CA